

Draft Initial Study
and
Notice of Intent to Adopt a Mitigated Negative Declaration

for the

Flying Change Farms Project

**Appendix A: Traffic Impact Analysis for the
Flying Change Farms**

Town of Loomis



May 2018

TRAFFIC IMPACT ANALYSIS
FOR THE
FLYING CHANGE FARMS
Loomis, California

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**TRAFFIC IMPACT ANALYSIS FOR THE
FLYING CHANGE FARMS**
Loomis, CA

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**TRAFFIC IMPACT ANALYSIS FOR THE
FLYING CHANGE FARMS**
Loomis, California

INTRODUCTION

This report summarizes **KDAnderson & Associates'** analysis of traffic impacts associated with the **Flying Change Farms** project in Loomis, California. The proposed project is located on 40 acres in the area off of Rocklin Road between Sierra College Blvd and Barton Road, as shown in Figure 1. The project involves development of facilities for boarding and training horses, and up to 55 horses may be accommodated on site, as shown in Figure 2.

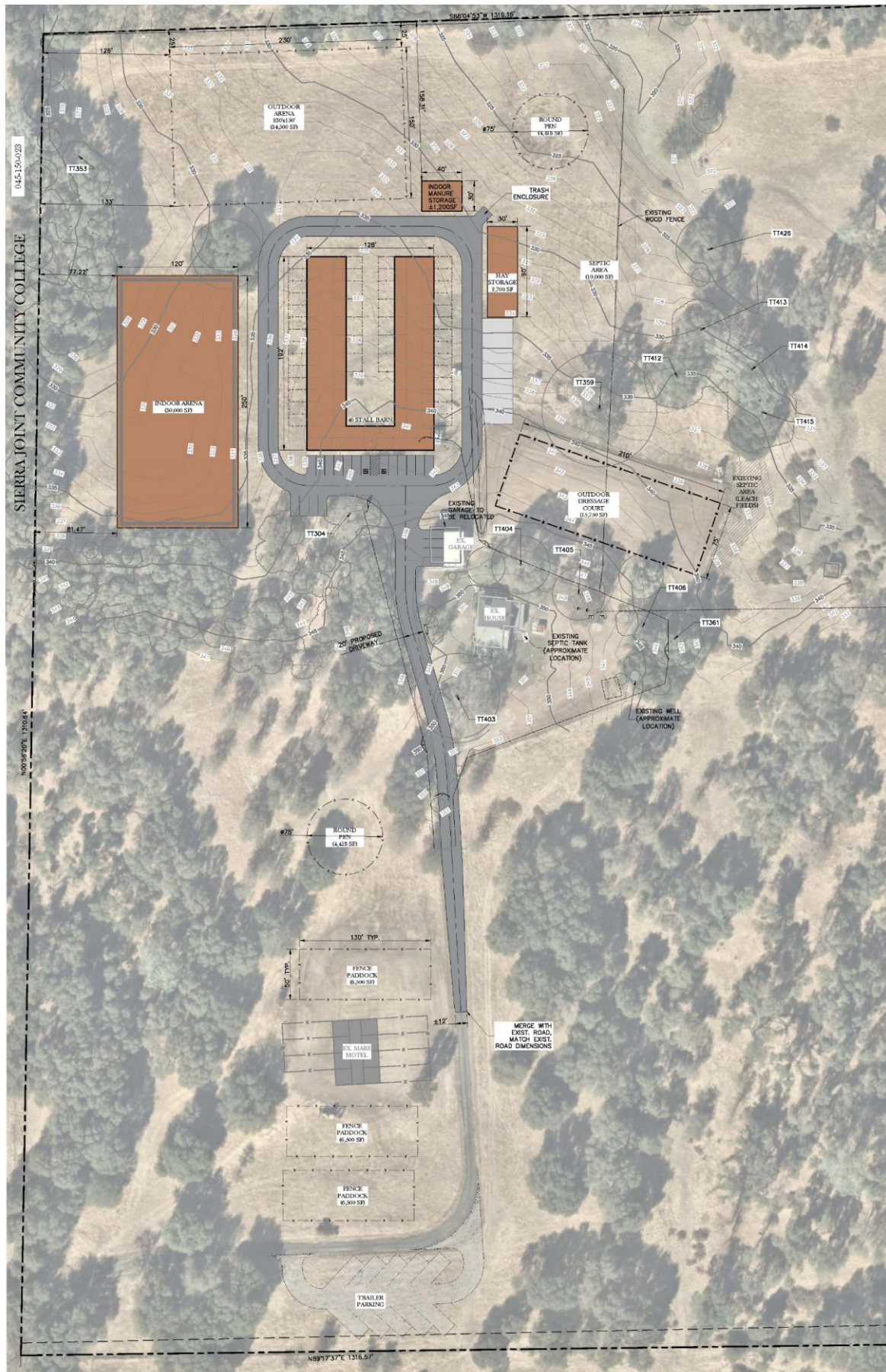
The scope of this traffic analysis is intended to conform to Town of Loomis guidelines. "Existing" traffic conditions have been evaluated through observation of current weekday a.m. and p.m. peak hour traffic volumes at three intersections in the vicinity of the project. The impacts of the proposed project have been evaluated by estimating probable project trip generation, assigning project trips to the study area street system and superimposing project traffic onto background conditions to determine whether development of this use will result in conditions in excess of the Town of Loomis' and City of Rocklin's minimum Level of Service standards.

Per Town of Loomis requirements, this study includes analysis of six (6) scenarios:

- 1) Existing Conditions
- 2) Existing Plus the Flying Change Farms
- 3) Existing Plus Approved Projects in Loomis and Rocklin (EPAP) conditions
- 4) EPAP Plus Flying Change Farms
- 5) Long Term Cumulative Conditions without the Project
- 6) Long Term Cumulative Plus the Flying Change Farms



VICINITY MAP



SITE PLAN

EXISTING SETTING

Study Area Streets / Intersections

The study area was identified based on knowledge of local traffic patterns and represents those locations that could potentially be impacted by the proposed project. The study area streets and intersections were reviewed and approved by Town of Loomis staff.

Streets. The text that follows describes the physical characteristics of the streets that serve the site.

Interstate 80 is the primary east-west arterial across Placer County and Northern California. In the vicinity of the proposed project, Interstate 80 is a six lane controlled access freeway. Access to the freeway is available to the proposed project at Rocklin Road interchange to the west and the Sierra College Blvd interchange to the north.

The California Department of Transportation (Caltrans) provides annual reports of the volume of traffic on the state highway system. The most recent counts available from Caltrans (2016) report an *Annual Average Daily Traffic (AADT)* volume of 101,000 vehicles per day between Sierra College Blvd and Horseshoe Bar Road, 98,600 AADT between Rocklin Road and Sierra College Blvd and 125,300 AADT west of Rocklin Road.

Sierra College Blvd is a north-south arterial road that connects State Route 193 (SR 193) north of Penryn with Interstate 80 and then continues southerly through Rocklin and Roseville before becoming Hazel Avenue in Sacramento County. Sierra College Blvd passes through portions of Placer County, the Town of Loomis, the City of Rocklin and the City of Roseville before entering Sacramento County.

In the area of the proposed project Sierra College Blvd is transitioning from a two lane rural highway to a six lane limited access urban arterial street. In the area of its intersection with Douglas Blvd, Sierra College Blvd is a six lane facility, and drops to a four lane roadway north of Olympus Drive. Development has already occurred at the top of Sierra College Blvd in Rocklin and Roseville, and as a result the west side of the highway in Rocklin has been improved to its ultimate width from Secret Ravine Parkway north to Rocklin Road. East side improvements have lagged as development has been limited on that side of the road. As a result, a single northbound through lane is available in the area from Nightwatch Drive through the Southside Ranch Road intersection. From that point north there are two northbound lanes and the roadway widens to a six lane facility in the area of Rocklin Road north to the Interstate 80 interchange. Sierra College Blvd is a designated Truck Route, with STAA terminal access available in the area of the I-80 interchange. The posted speed limit on Sierra College Blvd ranges from 40 mph at the I-80 interchange to 50 mph south of Rocklin Road and 45 mph near Douglas Blvd.

Traffic counts conducted in 2015 indicated that Sierra College Blvd carried 27,025 ADT north of Douglas Blvd and 32,245 ADT south of Douglas Blvd.

Rocklin Road is an east-west arterial street that links Rocklin with Interstate 80. Rocklin Road also continues easterly beyond Sierra College Blvd through the Town of Loomis to Barton Road, and this portion of Rocklin Road provides freeway access to the unincorporated portion of Placer County near Granite Bay. Today Rocklin Road is a 4 lane arterial street between Interstate 80 and Sierra College Blvd. East of Sierra College Blvd the south half of the roadway has been widened as development has occurred in Rocklin, but the road remains a two lane rural road through Loomis to its terminus at Barton Road. The posted speed limit on Rocklin Road is 40 mph in Loomis.

Daily traffic volume counts collected in 2014 for the Town of Loomis indicated that Rocklin Road carried 11,694 ADT in the area west of Barton Road.

Barton Road is a two lane north-south minor arterial that extends from its northern terminus at Brace Road in the Town of Loomis, continues southerly into the Granite Bay Community Plan area and extends across Douglas Blvd through Granite Bay to the Sacramento County line. In the area of the project Barton Road is a two lane rural road with limited shoulders and adjoining drainage ditches a configuration that is consistent with the GBCP's "Country Roadway" designation. The road is generally level but has vertical and horizontal curves in the area north of the Loomis Town limit. The speed limit on Barton Road is 35 mph in the area north of Douglas Blvd and 40 mph in the vicinity of the project and into Loomis.

Recent traffic counts for Barton Road totaled 5,278 ADT between Cavitt Stallman Road and the Loomis Town limits in 2015 and 7,413 ADT from the Town limits to Rocklin Road and 2,304 ADT north of Rocklin Road.

James Drive is a private road that extends north from Rocklin Road to provide access to the proposed project site. James Drive is generally 18 feet wide with no shoulder or sidewalks.

Monte Claire Drive is a private two-lane street that extends south from a point on Rocklin Road opposite James Drive to provide access to an existing residential subdivision. Monte Claire Drive is generally a 22 foot wide road.

Intersections. This analysis focuses on potential impacts to the following three intersections located on the routes that could be used by project traffic during the a.m. and p.m. peak hour. The quality of traffic flow is often governed by the operation of key intersections. The following intersections have been identified for evaluation in this study in consultation with Town of Loomis staff.

Listed from west to east, this analysis addressed the following intersections, and the governing jurisdiction is noted.

The **Sierra College Blvd / Rocklin Road intersection (Rocklin)** is a signalized intersection located west of the project site. The intersection has recently been improved by the City of Rocklin. Two through lanes are provided in each direction on Rocklin Road, and three through lanes are provided on Sierra College Blvd. Separate left turn lanes are provided on each approach, and dual left turn lanes are available on the northbound Sierra College Blvd approach.

Separate right turn lanes are provided on the northbound, southbound and eastbound approaches. Crosswalks are striped across the western and southern legs of the intersection.

The **Rocklin Road / James Drive / Monte Claire Drive intersection (Loomis)** is a stop sign controlled intersection (Monte Claire Drive approach only). Rocklin Road transitions from two eastbound travel lanes to a single eastbound through lane and a separate right turn lane. A continuous Two-Way Left-Turn (TWLT) lane is available on Rocklin Road, and it is striped as a dedicated westbound left turn lane approaching Monte Claire Drive. The southbound James Drive approach has a single lane, while the two-lane northbound Monte Claire Drive approach is striped as separate left turn and right turn lanes.

The **Rocklin Road / Barton Road intersection (Loomis)** is a “tee” controlled by an all-way stop. A separate left turn lane is provided on the northbound approach, but the other approaches are single lanes. The Town of Loomis Circulation Element indicates that a roundabout intersection will be installed at this location in the future.

Non-Automotive Facilities

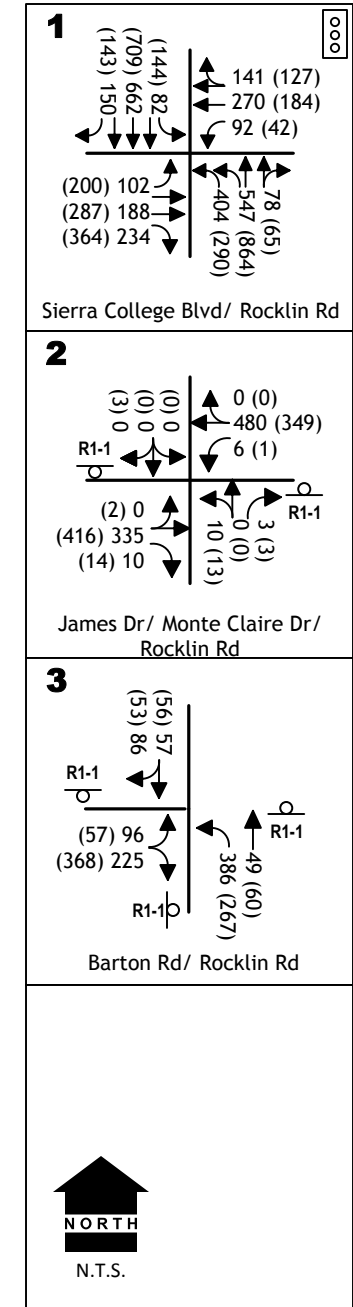
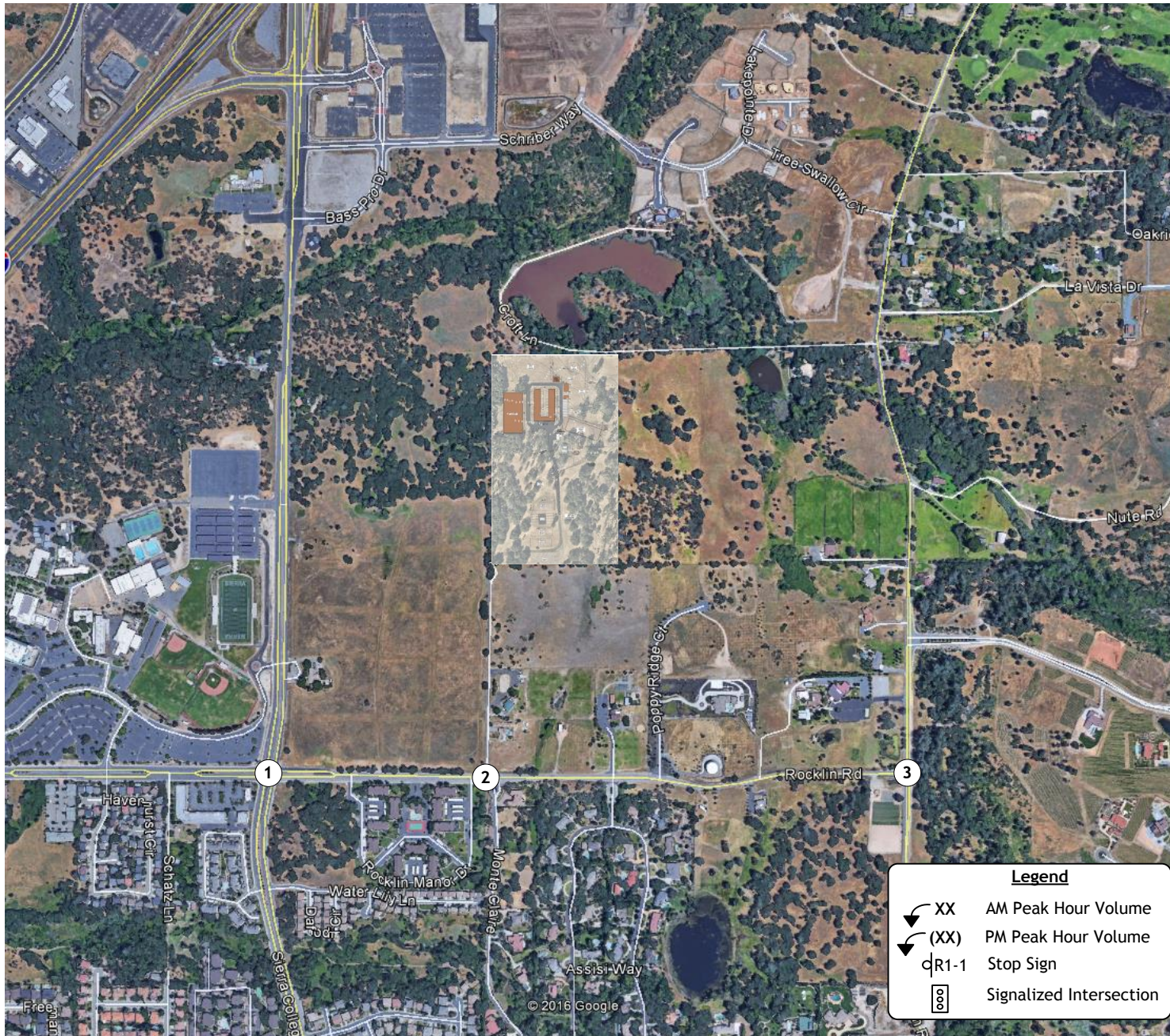
Bus Service. Public bus service is provided to the Rocklin - Loomis area by Placer County Transit. The *Taylor Road Shuttle* links Loomis, Penryn, Auburn and Sierra College in Rocklin. This route stops within Loomis at the downtown multi-modal center, and other stops are signed along Taylor Road and on Rocklin Road across from Sierra College. Service is provided between 6:30 a.m. and 4:15 p.m. Monday – Friday with four stops per day. Loomis is also served by *Placer Commuter Express*, which runs during commute hours and links the community with downtown Sacramento. The area is also served by *Placer County Transit Dial-a-Ride* from 6:00 a.m. to 8:00 p.m.

Bicycle Facilities. The *Town of Loomis Bicycle Transportation Plan (2010)* identifies existing and planned bicycle facilities. The existing bicycle system consists of a series of Class II (on-street lanes) facilities on major arterials. Class II lanes exist on Sierra College Blvd and on the south side of Rocklin Road from Sierra College Blvd to Monte Claire Drive. Elsewhere Class III (routes) are proposed on Barton Road and Rocklin Road in Loomis. The Bicycle plan indicates that Barton Road from Rocklin Road south to the Town limits and Rocklin Road west of Barton Road are to be Class III – Level A bicycle routes. This level of improvement would be characterized by shared use with motor vehicle traffic and is identified by Bike Route signs. These routes are intended to have a minimum amount of paving (at least 2-ft) beyond the travel lane to provide more room for bicyclists.

Sidewalks. The *Town of Loomis Trails Master Plan (2010)* identifies the location of existing or planned sidewalks and trails. Sidewalks are provided today on major downtown area streets and in developed residential subdivisions. However, there are many gaps in the sidewalk system. Sidewalk exists in Rocklin on the south side of Rocklin Road from Sierra College Blvd to Monte Claire Drive. There are no sidewalks east of Monte Claire Drive nor on the north side of Rocklin Road. The Town’s Trails Master Plan does not indicate that sidewalks will be constructed on Rocklin Road or Barton Road.

Existing Traffic Volumes

A.m. and p.m. peak hour traffic counts at study intersections were assembled for this study. Traffic counts conducted in April 2016 by the City of Rocklin for their Circulation Element Update were available for the Rocklin Road / Sierra College Blvd and Rocklin Road / Barton Road intersections. New counts were made in November 2017 at the Rocklin Road / James Drive / Monte Claire Drive intersection. Figure 3 displays the existing traffic volumes that were used for this analysis.



Level of Service – Methodologies

To assess the quality of existing traffic conditions, operating Levels of Service were calculated at each study intersection. "Level of Service" (or "LOS") is a qualitative measure of traffic operating conditions whereby a letter grade "A" through "F", corresponding to progressively worsening traffic operating conditions, is assigned to an intersection.

Table 1 presents the characteristics associated with each LOS grade. As shown in Table 1, LOS "A", "B" and "C" are considered satisfactory to most motorists, while LOS "D" is marginally acceptable. LOS "E" and "F" are associated with increasingly long delays and congestion and are unacceptable to most motorists.

Analysis Methodology at Signalized Intersections. Various methodologies exist to determine operating Levels of Service at signalized intersection. The available techniques vary with regard to factors such as traffic signal timing, interaction between adjoining signals, etc. The Town of Loomis makes use of the procedures contained in the *2010 Highway Capacity Manual (HCM)* for determining operating Level of Service. This methodology expresses the quality of intersection traffic operations in terms of average delay per vehicle. The City of Rocklin makes use of the techniques contained in *TRB Circular No. 212*, which is more commonly identified as "critical movement analysis". This methodology categorizes traffic operations in terms of the ratio of intersection volume to capacity (i.e., v/c ratio).

Table 1 presents general characteristics associated with each LOS grade under each methodology.

TABLE 1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec Volume / capacity (V/C) < 0.60	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec $0.60 \leq v/c < 0.70$	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec. $0.70 \leq V/C < 0.80$	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec $0.80 \leq V.C < 0.90$	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec $0.90 \leq V/C < 1.00$	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec V/C > 1.00	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
Sources: 2010 <u>Highway Capacity Manual</u> , Transportation Research Board (TRB) Special Report 209.			

Methodology at Un-signalized Intersections. At un-signalized intersections the number of gaps in through traffic, gap acceptance time, and corresponding average length of delays for motorists waiting to turn are used for Level of Service analysis. Procedures used for calculating un-signalized intersection Level of Service are as presented in the *2010 Highway Capacity Manual*.

At un-signalized intersections controlled by side street stop signs HCM methodology identified the average delay and Level of Service for all movements that must yield the right of way. Typically the “worst case” Level of Service is associated with side street traffic waiting to turn onto the major street. The Town of Loomis employs the Level of Service on the “worst case” approach to evaluate impacts.

Methodology for Evaluating Roadway Segment Level of Services. The Town of Loomis Circulation Element presents daily traffic volume thresholds that are applicable to the study area roadways within the Town's jurisdiction. These thresholds are shown in Table 2. Barton Road and Rocklin Road, within the limits of Loomis, are Low Access Control 2 lane Arterials.

**TABLE 2
EVALUATION CRITERIA FOR ROADWAY SEGMENT LEVEL OF SERVICE**

Roadway Capacity Class	Maximum Daily Traffic Volume Level of Service				
	A	B	C	D	E
Residential Street – 2 lanes	600	1,200	2,000	3,000	4,500
Rural Collector – 2 lanes	3,000	5,000	6,500	8,000	9,000
Low Access Control Arterial – 2 lanes	9,000	10,500	12,000	13,500	15,000
Low Access Control Arterial – 2 lanes with roundabouts	12,000	14,000	14,500	16,000	18,000
Low Access Control Arterial – 4 lanes	18,000	21,000	24,000	27,000	30,000
Moderate Access Control Arterial – 2 lanes	10,800	12,600	14,400	16,200	18,000
Moderate Access Control Arterial – 2 lanes with roundabouts	13,500	15,750	18,000	20,000	22,500
Moderate Access Control Arterial – 4 lanes	21,600	25,200	28,800	32,400	36,000
Source: Town of Loomis Circulation Element Highlighted values are applicable to study area					

Minimum Level of Service Thresholds and Significance Criteria

In this traffic impact study, the significance of the proposed project's impact on traffic operating conditions is based on a determination of whether project generated traffic results in roadway or intersection operating conditions being below acceptable standards as defined by the Town of Loomis and City of Rocklin. A project's impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would significantly worsen an already unacceptable LOS without the project.

Loomis Level of Service Criteria. The Town of Loomis' Circulation Element identifies the Town's policies on Level of Service.

Level of Service Policy: *In order to minimize congestion, maintain Level of Service C on all roads and intersections within the Town of Loomis. Level of Service D may be allowed in conjunction with development approved within the Town. As an exception to this standard, at the intersections of King and Taylor, Horseshoe Bar Road and Taylor, Horseshoe Bar Road and I-80, Sierra College and Brace Road, and Webb and Taylor, when:*

1. The deficiency is substantially caused by "through" traffic, which neither begins nor ends in Loomis, and is primarily generated by non-residents; or
2. The deficiency will be temporary (less than three years), and a fully-funded plan is in place to provide the improvements needed to remedy the substandard condition.

Mitigation of Impacts from Unincorporated Area Projects: Notwithstanding any other General Plan policy or provisions, in the event that significant adverse impacts will result from the construction of large developments on the Town's perimeter, the Town shall make every reasonable effort to have the developers adequately mitigate the adverse impacts.

Town of Loomis Standards of Significance. The significance of traffic impacts in Loomis is identified in the General Plan Circulation Element and GPU EIR.

Significance Criteria. The Loomis General Plan also contains thresholds based on the volume of traffic on individual roadway segments. Measured in terms of the Volume / Capacity ratio (V/C), unsatisfactory conditions occur when the v/c ratio exceeds 0.80 (Exceeds LOS C). The Town of Loomis assumes that a significant traffic impact occurs when the minimum segment Level of Service is exceeded and the project increases the volume by more than 5%. The criteria applied at intersections were reviewed with Town staff. Because the Town has not adopted a measure for determining the significance of project impacts at intersections when background conditions exceed the minimum standard, Town staff indicated that the City of Rocklin's significance criteria should be employed at the Rocklin Road / James Drive / Monte Claire Drive intersection. As noted below, those criteria allow an increase of up to 5% in the total intersection volume before the impact is significant.

City of Rocklin Standards of Significance. Local jurisdictions adopt Standards of Significance for determining environmental impacts relating to traffic, and in this study area the standards of the City of Rocklin apply at the Rocklin Road / Sierra College Blvd intersection. The Rocklin General Plan notes that Level of Service C is the minimum standard but that LOS D may be accepted during peak periods under identified circumstances.

Based on the City's significance threshold, if an intersection is already operating at an unsatisfactory Level of Service, an increase of 5 percent (i.e., an addition of 0.05) to the v/c ratio at a signalized intersection would be considered a measureable worsening of intersection operations and therefore would constitute a significant project impact. If an un-signalized intersection is already operating at an unsatisfactory Level of Service (i.e., LOS D), then the addition of traffic exceeding more than 5% of the total traffic at an intersection would be a significant project impact.

Existing Levels of Service

Intersections. Current a.m. and p.m. peak hour Levels of Service are summarized in Table 3. As shown, current Levels of Service meet the City for Rocklin and Town of Loomis' minimum LOS C threshold.

Traffic Signal Warrants. Current traffic volumes at the Rocklin Road / Barton Road intersection were compared with rural peak hour warrants contained in the *California Manual on Uniform Traffic Control Devices*. The volumes occurring today in both the a.m. and p.m. peak hours meet warrant requirements. While satisfying peak hour warrants can be an indication that a traffic signal is needed, it is also necessary to consider warrants that address conditions occurring throughout the day to determine whether a traffic signal should be installed.

**TABLE 3
EXISTING INTERSECTION LEVEL OF SERVICE**

Intersection	Control	AM Peak Hour		PM Peak Hour		Peak Hour Traffic Signal Warrants Met?
		Volume / Capacity or Average Delay (sec)	LOS	Volume / Capacity or Average Delay (sec)	LOS	
Rocklin Road / Sierra College Blvd	Signal	0.530	C	0.700	C	Not Applicable
Rocklin Road / James Drive / Monte Claire Drive	NB / SB Stop					No
Northbound Approach		17.2	C	16.8	C	
Southbound Approach		-	-	10.4	B	
Rocklin Road / Barton Road	All-Way Stop	18.2	C	14.9	B	Yes

Roadway Segments. Conditions on study area roads have also been evaluated within the context of current daily traffic volumes and Town of Loomis Level of Service thresholds, as shown in Table 4. Today the two-lane portion of Rocklin Road between Sierra College Blvd and Barton Road operates at LOS C based on the Town's standards.

**TABLE 4
CURRENT DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE**

Roadway	Segment	# of Lanes	Average Daily Traffic	Daily Volume/ Capacity Ratio*	LOS
Rocklin Road	Sierra College Blvd to Barton Road	2	11,694	0.780	C
(*) based on General Plan threshold capacity of 15,000 ADT for two lane road					

REGULATORY SETTING

State of California

The **Transportation Corridor Concept Report (TCCR)** is Caltrans long range (20 year) planning document for each State Highway route. The purpose and need of each TCCR are to identify existing route conditions and future needs, including existing and forecasted travel data, a concept Level of Service (LOS) standard, and the facility needed to maintain the concept LOS and address mobility needs over the next 20 years.

The Interstate 80 TCCR provides data for the portion of Interstate 80 from the Sierra College Blvd interchange to the Nevada state line. The Town of Loomis adjoins segment 9. The TCCR notes that the concept LOS for this segment is LOS F assuming the existing six lane facility remains. The TCCR identifies programmed improvements and notes that widening the Horseshoe Bar Road overcrossing for 4 lanes is programmed in the Metropolitan Transportation Plan (MTP). No improvements to mainline I-80 are anticipated.

Caltrans Traffic Study Guidelines (2002). The *Caltrans Guide for the Preparation of Traffic Impact Studies* (December 2002) includes the following generalized statement regarding target Levels of Service goals for Caltrans facilities.

Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities, however, Caltrans acknowledges that this may not be always feasible *and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing Measure of Efficiency (MOE) should be maintained.*

Town of Loomis General Plan

The Town of Loomis General Plan (2001) and updated Circulation Element contain the following issues, goals and policies:

Level of Service

Issue: Growth in traffic volumes from development approved within, and adjacent to, the Town will cause increased congestion and need for roadway improvements, depending upon the chosen service level standard.

Goal: To strive for service levels that reflect a balance between mobility, cost-effectiveness, and financial resources.

Level of Service Policy. In order to minimize congestion, maintain Level of Service C on all roads and intersections within the Town of Loomis. Level of Service D may be allowed in conjunction with development approved within the Town as an exception to this standard, at the intersections of King Road / Taylor Road, Horseshoe Bar Road / Taylor Road, Horseshoe Bar Road / Interstate 80 ramps, Sierra College Blvd / Brace Road and Webb Street / Taylor Road when:

1. the deficiency is substantially caused by “through” traffic which neither begins nor ends in Loomis, and is primarily generated by non-residents, or
2. the deficiency will be temporary (i.e., less than three years), and a fully funded plan is in place to provide the improvements needed to remedy the sub-standard condition.

The Town accepts LOS D at the King Road / Taylor Road intersection during the morning peak hour due to the effects of school traffic.

Town of Loomis Traffic Impact Fee and CIP. The existing Town of Loomis Traffic Impact Mitigation Fee Program addresses funding for community-wide improvements. For example, as noted in Table 5 the fee program identifies a portion of the cost of improvements to the Barton Road / Rocklin Road intersection. The Circulation Element suggests a roundabout be installed.

**TABLE 5
TOWN OF LOOMIS IMPACT FEE PROJECTS**

Street / Intersection	Segment	Description of Improvements	Loomis Responsibility
Barton Road / Rocklin Road	Not applicable	Signalization	38%
Barton Road	Brace Road to Town limits	Lane width and shoulders	50%
Rocklin Road	Sierra College to Barton Road	Widening	14%

PROJECT CHARACTERISTICS

Operations / Assumptions

The project description notes that up to 55 horses may be boarded. There would be 48 stalls, including 8 mare stalls (which could have a mare and foal), so there would likely be very few if any pasture horses. There will also be 1-2 trailer in's 3-4 days a week for lessons.

Trip Generation

The number of automobile trips that may result from development of the proposed project has been estimated based on an understanding of the project's daily operations and a.m. / p.m. peak hour observation of a similar facility. While trip generation rates published in the Institute of Transportation Engineers (ITE) publication *Trip Generation, 10th Edition*, have been consulted, no published data is available for this type of use.

Table 6 identifies the number of weekday peak hour vehicle trips observed at a similar existing facility, the resulting trip generation rates on a "per horse boarded" basis and the estimate for project trip generation based on those rates. As shown, a few owners are expected to trailer in horses for lessons (i.e., 1-2 per day on 3-4 days per week), and these trips have been added to the project total. As shown, the proposed project is likely to generate 6 trips in the a.m. peak hour and 16 trips in the weekday p.m. peak hour.

While daily traffic was not observed at the existing stable, it is possible to estimate project daily traffic based on the number of hours that the stable will be open. A total of 29 vehicle trips were observed during three hours (i.e., 8-9 and 4-6 p.m.) or an average of 10 trips per hour. Assuming that owners can travel to or from the site from 7:00 a.m. to 8:30 p.m. (i.e., 1½ hours) then we would expect 135 daily trips. Adding trips caused by horses trailered to the site for lessons, the daily total is estimated to be 139 trips.

**TABLE 6
TRIP GENERATION RATES**

Description	Unit	Trips per Unit						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Existing Stable ¹	57 horses stabled	-	4	1	5	7	9	16
	horse	-	80%	20%	0.09	44%	56%	0.28
Flying Change Farms	55 horses boarded	135	4	1	5	7	9	16
Trailers for lessons	1-2 per day	4	1	0	1	0	0	0
Total		139	5	1	6	7	9	16
⁽¹⁾ Big Sky Equestrian, 7730 Cardwell Ave, Orangevale								

As a comparison, the project site was previously approved for single family residences, and the Poppy Ridge Phase 2 project was to include 15 single family lots. At standard ITE rates for detached residences, that use could have generated 143 daily trips, with 11 trips in the a.m. peak hour and 15 trips in the p.m. peak hour.

Trip Distribution

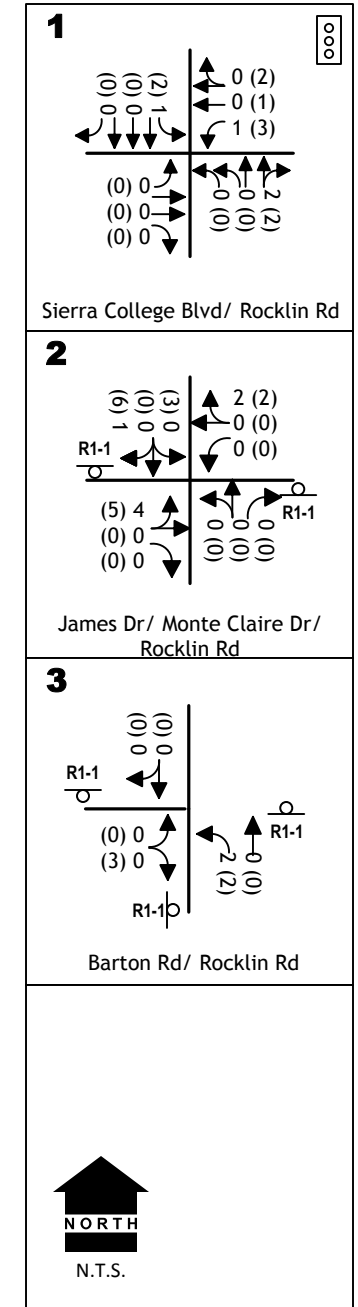
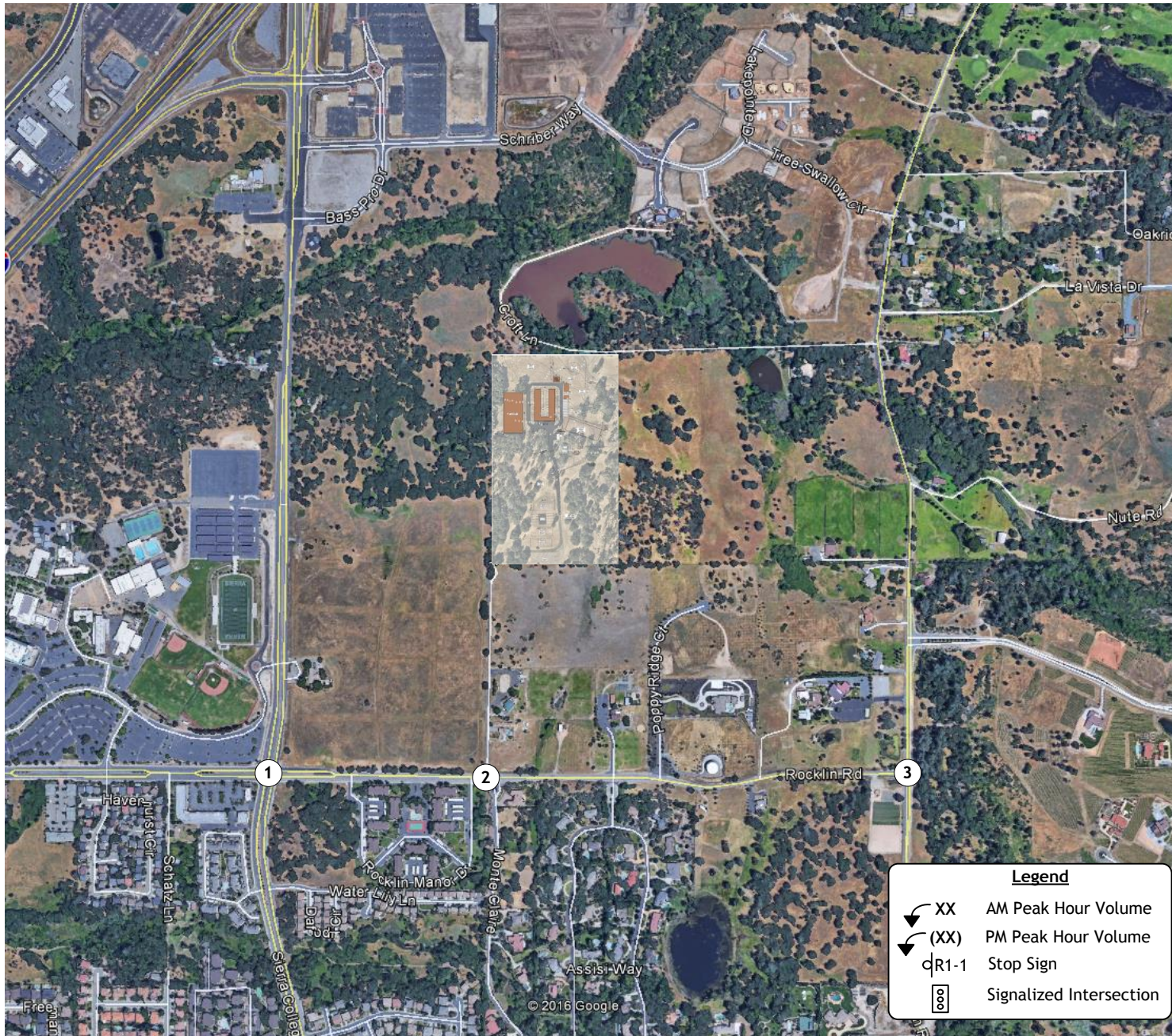
The origins / destinations of trips associated with the proposed project will generally be dependent on the location of a horse owner's residence. The proponents expect that their clients would be mostly traveling from surrounding areas such as Auburn, Newcastle, Penryn, Loomis, Granite Bay, and Orangevale. For this analysis the trip distribution has been based on the routes available from these areas, and Table 7 identifies the distribution assumptions.

**TABLE 7
TRIP DISTRIBUTION ASSUMPTIONS**

Direction	Route	Percentage of Total Trips
North	Sierra College Blvd north of Rocklin Road	25%
South	Barton Road south of Rocklin Road	35%
	Sierra College Blvd south of Rocklin Road	30%
West	Rocklin Road west of Sierra College Blvd	10%
Total		100%

Trip Assignment. Figure 4 identifies the assignment of project trips to the study area street system when the project is fully operational.

Access Improvements. The proposed project includes improvements to the James Drive approach to Rocklin Road. The roadway will be widened to 20 feet in the area immediately north of Rocklin Road, and curb return radii will be installed that are commensurate with the turning requirements of vehicles pulling trailers.



EXISTING PLUS PROJECT CONDITIONS

Traffic Volumes

The impacts associated with developing the Flying Change Farms as proposed have been identified by superimposing project trips onto the Existing traffic volumes described earlier. The resulting Existing Plus Project traffic volumes are noted in Figure 5.

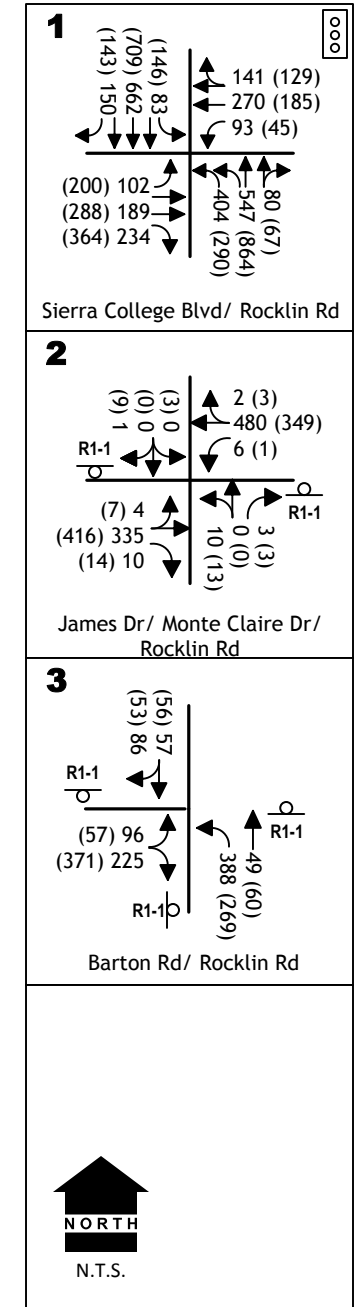
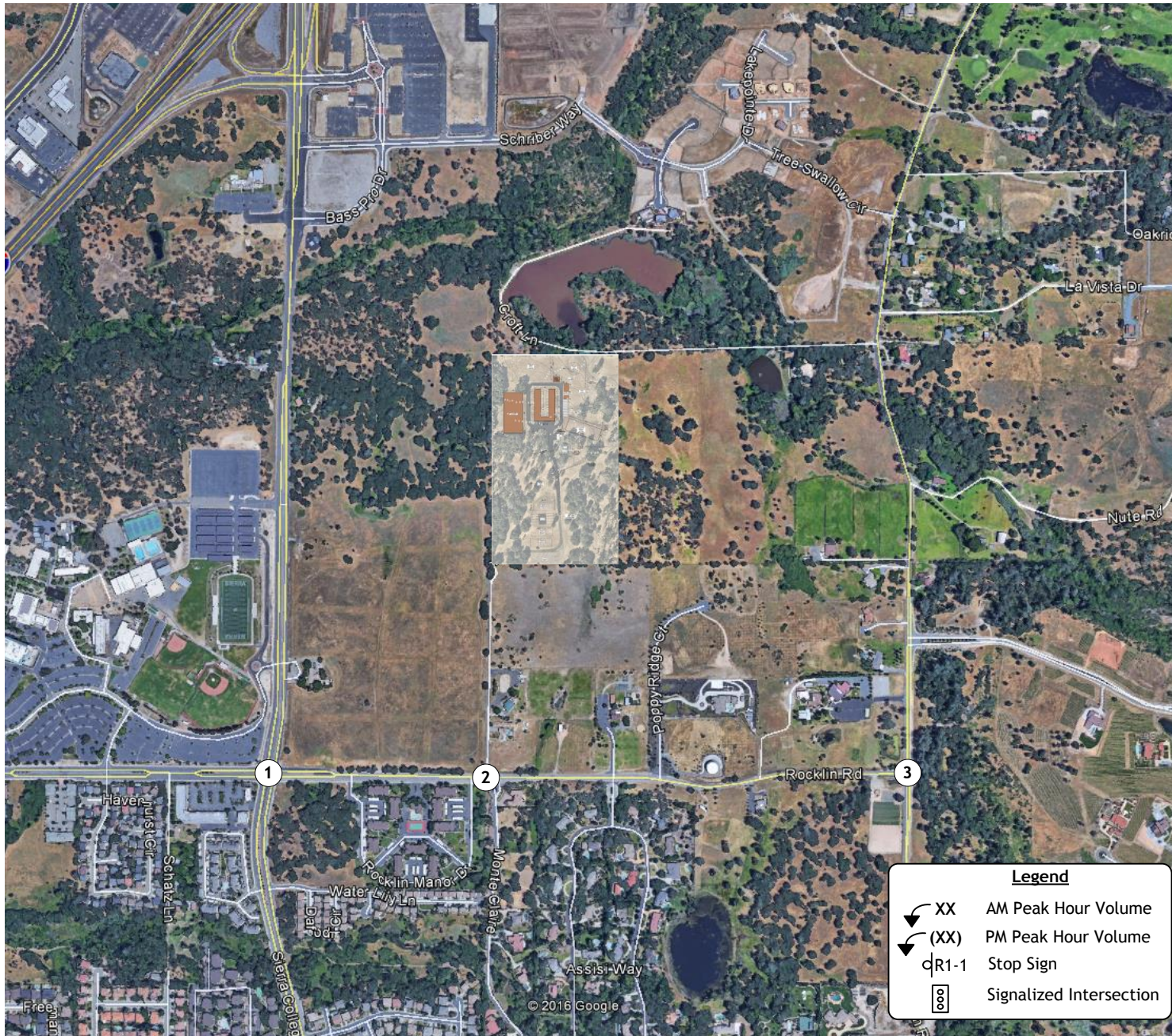
Level of Service Impacts

Intersection Levels of Service. Conditions occurring at study intersections as a result of the project are noted in Table 8.

The Level of Service at all intersections would meet the City of Rocklin and the Town of Loomis' LOS C goal with completion of the project.

Roadway Segment Level of Service. Levels of Service on Rocklin Road in Loomis east of the project site are noted in Table 9. As indicated, the study segments that currently carry traffic volumes that fall below the minimum LOS C threshold will continue to do so with completion of the project.

The project would add minimal traffic to Interstate 80, as the area Arterial Street system will be used for most trips. The daily volume increase on I-80 at any location would be less than 30 vehicles per day, which would not have a significant impact. No further analysis of the project's effects on I-80 is required.



EXISTING PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

**TABLE 8
EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE**

Intersection	Control	AM Peak Hour				PM Peak Hour			
		Existing		EX Plus Project		Existing		EX Plus Project	
		Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS
Rocklin Road / Sierra College Blvd	Signal	0.530	A	0.530	A	0.700	C	0.704	C
Rocklin Road / James Drive / Monte Claire Drive	NB / SB Stop								
Northbound Approach		17.2	C	17.5	C	16.8	A	17.2	C
Southbound Approach		-	-	11.5	B	10.4	B	12.5	B
Rocklin Road / Barton Road	All-Way Stop	18.2	C	18.4	C	14.9	B	15.0	C

**TABLE 9
EXISTING PLUS PROJECT DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE**

Roadway	Segment	# of Lanes	Existing			Existing Plus Project			
			Average Daily Traffic	Vol / Cap Ratio*	LOS	Average Daily Traffic		Vol / Cap Ratio	LOS
						Project Only	Total		
Rocklin Road	Sierra College Blvd to Project (Rocklin)	2	11,694	0.780	C	90	11,784	0.786	C
	Project to Barton Road (Loomis)	2	11,694	0.780	C	49	11,743	0.783	C
(*) based on General Plan threshold capacity of 15,000 ADT for two lane road									

Access Impacts

Because the existing Rocklin Road / James Drive intersection is not designed to current Town standards, without improvements conflicts between entering and exiting vehicles would occur if these vehicles entered the driveway concurrently. In addition, the intersection was not designed for vehicles pulling trailers. These issues represent a significant safety impact.

The proponents intended to improve the James Drive approach to the intersection to the satisfaction of the Town Engineer. The proposed improvements will:

- accommodate two-way travel without conflicts
- accommodate vehicles pulling trailers without conflicts

Ideally these improvements would be installed at their ultimate location on Rocklin Road with regards to long term plans for widening the street to accommodate all transportation modes. As a result some interim tapers / transitions may be required to match the new improvements with the current edge of pavement. This work will also need to include confirmation of adequate sight distance from the new access location.

With these improvements the project's impacts on safety would not be significant.

Impacts to Alternative Transportation Modes

Pedestrians. The project will be unlikely to generate pedestrian activity. Based on the regional distribution of its clients' residences few if any pedestrians are anticipated. Thus, the project's impact is not significant and mitigation is not required.

Bicycles. The project will be unlikely to generate appreciable bicycle activity, again based on the location of clients' residences. This impact is not significant, and no mitigation is required.

Transit. The project's employees and clients would be able to take advantage of the existing Placer Transit services available along Rocklin Road and Sierra College Blvd. While existing stops are not particularly close to the site, the number of additional riders generated by the project is unlikely to be large enough to justify changes to existing routes or modification of existing schedules. The existing transit service has the capacity to accommodate any riders originating in the project. Thus the project's impact is not significant and mitigation is not required.

CUMULATIVE TRAFFIC CONDITIONS – SHORT TERM (EPAP)

Existing Plus Approved Projects (EPAP)

A short term future condition that assumes occupancy of other approved / pending projects is typically assessed under Caltrans Traffic Study Guidelines and required by the City of Rocklin. This scenario has been investigated based on a list of approved / pending projects employed for other recent traffic studies in Rocklin, as well as the list of approved projects in the Town of Loomis that was presented in the Village at Loomis FEIR.

Land Use Assumptions. The City of Rocklin maintains a list of development proposals and tracks their completion status. This list of development proposals is updated periodically by the City of Rocklin to reflect both ongoing development activity as well as proposed changes to previously approved projects. Projects are periodically removed from the City's list of development proposals when approved entitlements have lapsed or have been withdrawn.

For purposes of this analysis and to ensure that the baseline for traffic analysis purposes includes existing and approved development at the study date, in February 2016 City of Rocklin staff evaluated recent development history in the Sierra College Blvd area to identify any additional approved development that should be assumed to be completed, to quantify the level of development that has occurred where projects have proceeded in phases (such as the Rocklin Crossings and Rocklin Commons projects) and to identify those previously approved projects that have lapsed or have been withdrawn by the project proponent. This information was updated to reflect the current occupancy of Rocklin Commons and Rocklin Crossings, as well as the number of dwellings occupied in the Crowne Pointe (Croftwood) and Rocklin 60 Subdivisions at the time the current traffic counts were completed in April 2016.

Table 10 presents the list of approved but not constructed Rocklin projects in the vicinity of the proposed Flying Change Farms project, as well as their estimated a.m. and p.m. peak hour trip generation resulting from these uses. As shown, the number of new a.m. peak hour trips anticipated from approved/pending development totals 2,140 while 3,184 trips are forecast in the p.m. peak hour. The p.m. forecast is greater since many of the identified projects are retail uses that are often closed during the a.m. peak hour.

Table 11 also identified projects included as “Approved and Proposed” in the Village at Loomis FEIR.

**TABLE 10
APPROVED / PENDING PROJECTS AND THEIR TRIP GENERATION**

Description	Land Use	Size		AM Peak Hour			PM Peak Hour Trips		
		Quantity	Unit	In	Out	Total	In	Out	Total
City of Rocklin									
Quarry Row Subdivision	Single Family Housing	64	du	12	36	48	41	23	64
Avalon Subdivision ⁽¹⁾	Single Family Housing	79	du	15	44	59	50	29	79
Brighton Subdivision ⁽¹⁾	Single Family Housing	75	du	14	42	56	47	28	75
Garnet Creek	Single Family Housing & Multiple Family Housing	340	du	41	152	193	155	86	241
Granite Dominguez Subdivision	Single Family Housing	71	du	13	40	53	45	26	71
Los Cerros Subdivision	Single Family Housing	115	du	22	64	86	74	41	115
Grove Street Subdivision	Single Family Housing	7	du	1	4	5	4	3	7
Croftwood, Unit 1 / Rocklin 60	Single Family Housing	156 ⁽⁵⁾	du	30	87	117	101	59	160
Croftwood Unit 2 (4588 Barton)	Single Family Housing	63	du	12	35	47	40	23	63
Oak Vista	Single Family Housing	63	du	12	35	47	40	23	63
Granite Terrace	Single Family Housing	42	du	8	24	32	27	15	42
Rocklin Gateway Apartments	Multi-Family Residential	204	du	21	83	104	45	81	126
Granite Marketplace (Lowes)	Home Improvement	138	ksf	105	80	185	115	130	245
Rocklin Crossings ⁽²⁾	Home Improvement, Discount Superstore	97.8	ksf	46	29	75	175	182	357
Rocklin Commons ⁽³⁾	Discount Superstore	49.3	ksf	24	15	39	82	88	170
The Center at Secret Ravine ⁽⁴⁾	Retail Commercial	18.6	ksf	12	6	18	22	28	50
Parklands Subdivision ⁽¹⁾	Single Family Housing	142	du	27	80	107	94	63	157
Clover Valley	Residential	558	du	106	313	419	377	186	563
Winding Lane Estates	Single Family Residential	27	du	5	15	20	18	9	27
Rocklin Audi	Auto Dealership	34	ksf	49	16	65	35	53	89
Rocklin Station	Retail Commercial	32.6	ksf	144	122	266	154	145	299
Park Vista Subdivision	Single Family Residential	63	du	12	35	47	40	23	63
Sierra Gateway Apartments	Multiple Family Residential	195	du	39	60	99	78	42	121
Secret Ravine Community	Mixed Use	-	-	35	71	106	94	76	170
Total				805	1488	2293	1953	1462	3417
⁽¹⁾ Under Construction and partially occupied									
⁽²⁾ 543,500 sf approved, in April 2016 a total of 97,800 sf remained to be occupied									
⁽³⁾ 410,942 sf approved, in April 2016 a total of 47,300 sf remained to be occupied. 26,600 sf approved, in April 2016 4,000 sf occupied (Shell Station)									
⁽⁴⁾ 156 du vacant or under construction in February 2016									

TABLE 11
APPROVED / PROPOSED PROJECTS IN LOOMIS AND THEIR TRIP GENERATION

Description	Land Use	Size		AM Peak Hour			PM Peak Hour Trips		
		Quantity	Unit	In	Out	Total	In	Out	Total
Town of Loomis									
Del Oro Vistas	Single Family Residential	12	du	2	7	9	8	4	12
Taylor Road Mixed Use Project	Single Family Residential	46	du	9	26	35	29	17	46
	Commercial	19.02	ksf	11	7	18	34	37	71
Sierra De Montserrat	Single Family Residential	54	du	10	31	41	34	20	54
Poppy Ridge Estates	Single Family Residential	6	du	1	4	5	4	2	6
Heritage Park Estates Phase 2	Single Family Residential	40	du	8	22	30	25	15	40
Loomis Crossing	Commercial	17.04	ksf	10	6	16	30	33	63
Village at Loomis	Mixed Use	-	-	147	248	395	311	248	559
Total				198	351	549	475	376	851

Circulation System Improvements. The approved Rocklin Station project will install a new traffic signal at the Sierra College Blvd / Schriber Way intersection to provide project access, but this improvement is beyond the study area. The Sierra Gateway Apartments will install frontage improvements on Sierra College Blvd that are consistent with SPRTA and City of Rocklin policy. This work would yield the third northbound travel lane on Sierra College Blvd along the project's frontage and a separate right turn lane. However, in the near term the third northbound lane will not be useable until the northeast corner of the Sierra College Blvd / Rocklin Road intersection is developed and its frontage improvements are installed.

Background Traffic Volume Forecasts. Not every approved project will add traffic to the study intersections. For this analysis the incremental change in traffic resulting from approved projects was added to the existing Year 2016 existing volumes, and Figure 6 presents resulting EPAP traffic volumes of the study area. Figure 7 presents EPAP with the proposed Flying Change Farms project.

EPAP Intersection Levels of Service. Table 12 compares Existing Plus Approved Projects (EPAP) Levels of Service with and without the Flying Change Farms project. As shown, projected Levels of Service will be LOS D at the Sierra College Blvd / Rocklin Road intersection with and without the Flying Change Farms projects, and LOS C or better at the other two intersections. LOS D exceeds the City of Rocklin's minimum LOS D standard. In this case because conditions in the p.m. peak hour exceed the standard with and without the project, under Rocklin guidelines the significance of Flying Change Farms impacts is determined based on its percentage traffic increase. The incremental volume increase associated with Flying Change Farms is 0.02% which is below the 5% increment permitted by the City of Rocklin. Thus the project's impact is not significant.

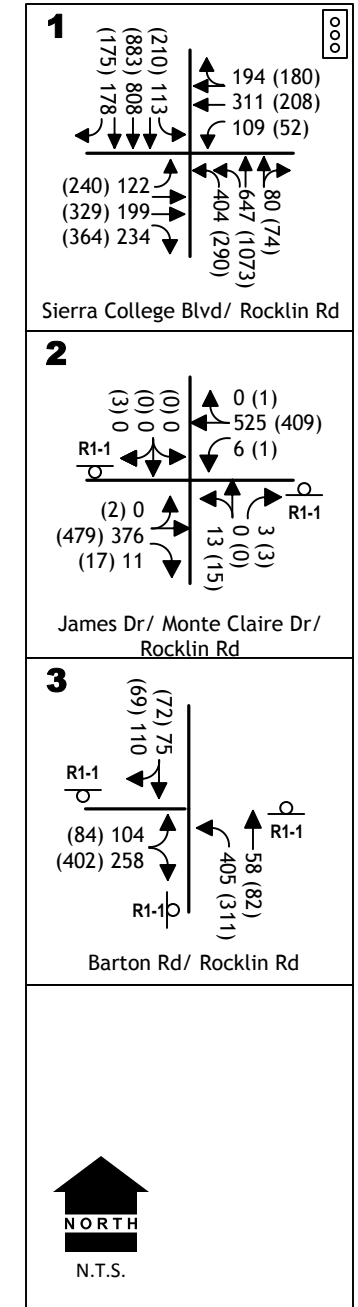
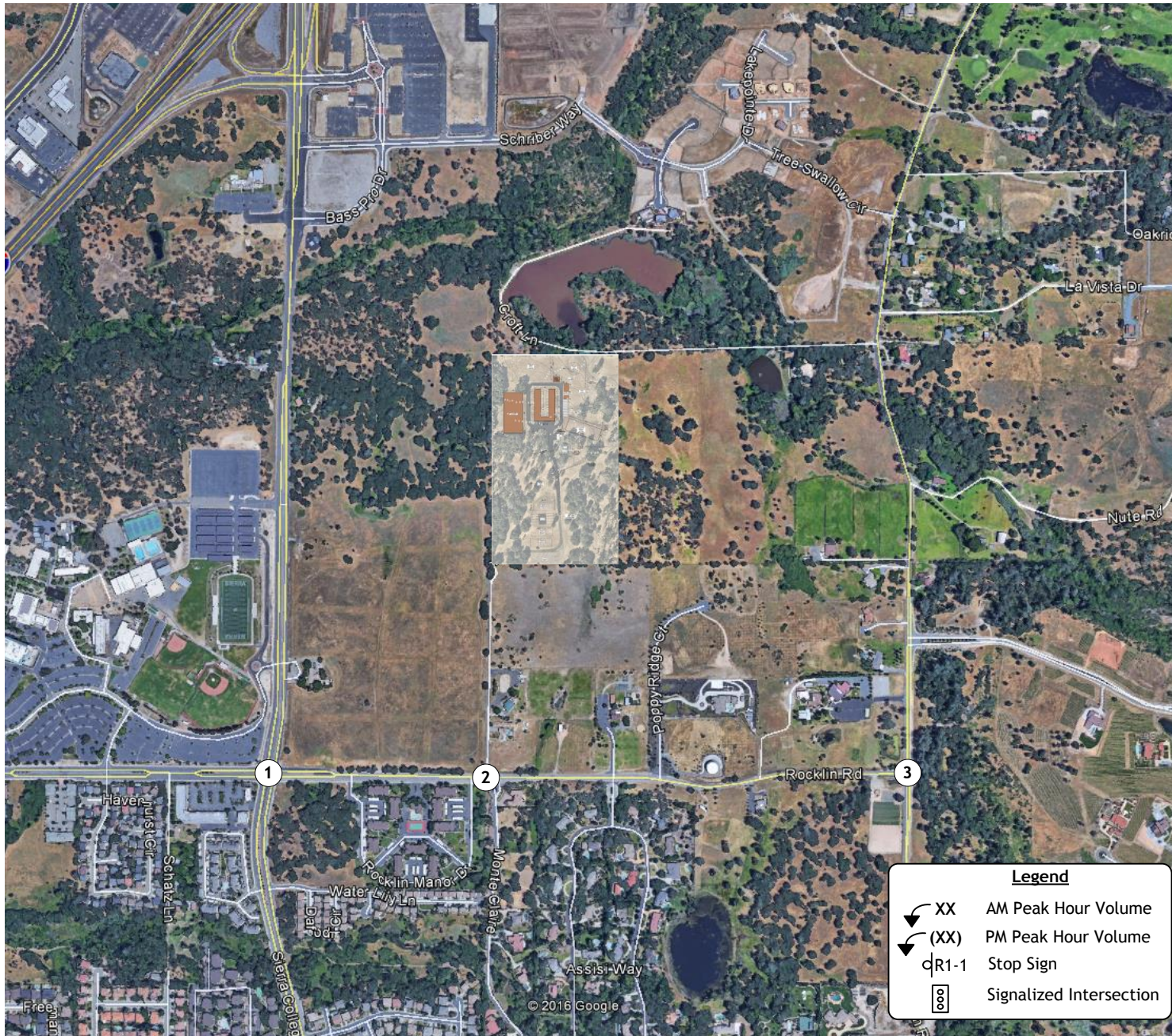
Traffic Signal Warrants. The volume of traffic occurring at the Rocklin Road / Barton Road intersection under EPAP and EPAP plus Project conditions satisfied rural peak hour traffic signal warrants.

Roadway Segment Level of Service. As shown in Table 13, if all the approved / pending projects identified by Rocklin and the Town of Loomis are occupied, then the volume of traffic on Rocklin Road will increase. Based on the Town's LOS standards, the two-lane section of Rocklin Road west of James Drive would operate at LOS D, as would the segment of Rocklin Road east of James Drive.

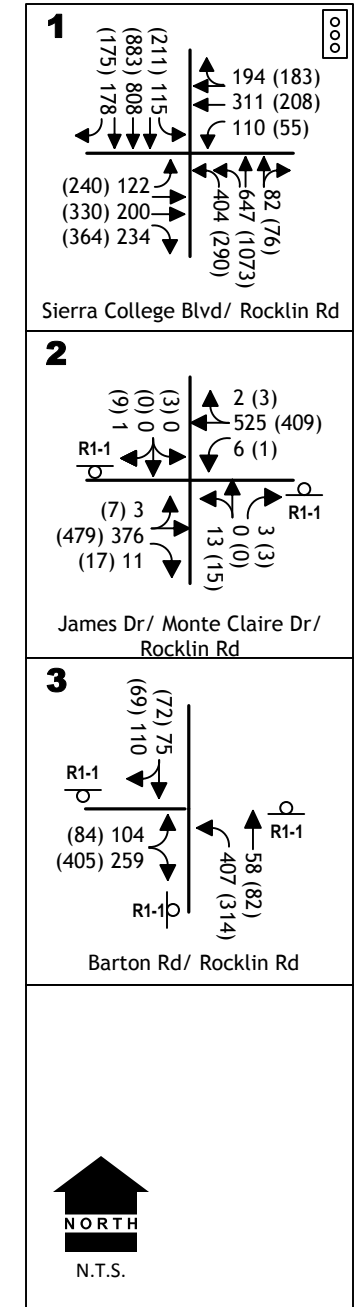
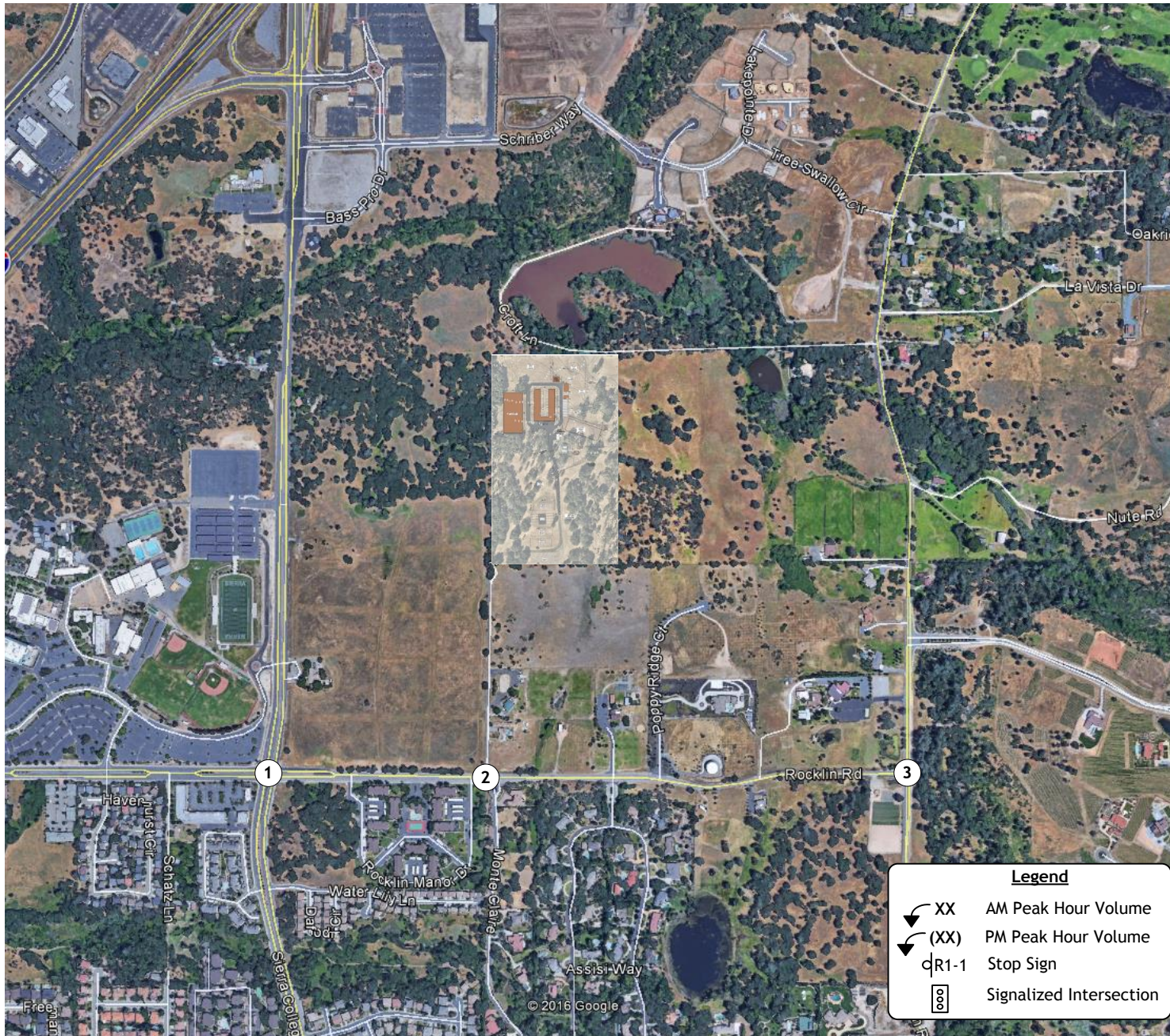
The City of Rocklin's traffic study guidelines do not consider roadway segment Level of Service to be a significant criteria. However, when the area north of Rocklin Road within the City limits is developed frontage improvements commensurate with a four-lane road will be installed.

To deliver LOS C on the Town's roads it would be necessary to improve Rocklin Road to the three-lane arterial standard described in the Circulation Element.

The addition of project trips would not change the Level of Service at either location, and Flying Change Farms traffic uses only 0.3% of the roadway's capacity. Because LOS D is projected with and without the project, the significance of the impact is measured based on change in volume / capacity ratio. In this case, the change east of the project's access is 0.003, which is less than the 0.05 increment allowed by the Town. Thus, the project's impact is not significant and mitigation is not required.



EXISTING PLUS APPROVED/PENDING PROJECTS (EPAP)
TRAFFIC VOLUMES AND LANE CONFIGURATIONS



EPAP PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

0095-01 RA 4/6/2018

figure 7

**TABLE 12
EXISTING PLUS APPROVED / PENDING PROJECTS INTERSECTION LEVEL OF SERVICE**

Intersection	Control	AM Peak Hour				PM Peak Hour			
		Existing Plus Approved / Pending Projects		EPAP Plus Project		Existing Plus Approved / Pending Projects		EPAP Plus Project	
		Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS
Rocklin Road / Sierra College Blvd	Signal	0.597	A	0.597	A	0.840	D	0.842	D
Rocklin Road / James Drive / Monte Claire Drive	NB / SB Stop			19.9.5	C				
Northbound Approach		19.7.3	C	11.9	B	19.0	C	20.2	C
Southbound Approach		-	-			10.9	B	13.6	B
Rocklin Road / Barton Road	All-Way Stop	22.0	C	22.3	C	20.4	C	20.8	C
BOLD values exceed the minimum LOS standard									

**TABLE 13
EXISTING PLUS PROJECT DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE**

Roadway	Segment	# of Lanes	Existing Plus Approved Projects				EPAP Plus Project			
			Average Daily Traffic		V / C*	LOS	Average Daily Traffic		V / C	LOS
			Growth	Total			Project Only	Total		
Rocklin Road	Sierra College Blvd to Project (Rocklin)	2	1,129	12,823	0.855	D	90	12,913	0.861	D
	Project to Barton Road (Loomis)	2	1,097	12,791	0.853	D	49	12,840	0.856	D
(*) based on General Plan threshold capacity of 15,000 ADT for two lane road BOLD values exceed the minimum LOS standard										

CUMULATIVE TRAFFIC CONDITIONS – LONG TERM

Introduction

In the long term it is likely that the conditions observed today will change as the result of new development in Loomis and throughout the Sacramento Metropolitan Region, as well as the construction of new roads. The Town of Loomis and City of Rocklin commissioned the creation of a regional travel demand forecasting models, and those analysis tools became available in June 2009. The Loomis and Rocklin models are intended to be consistent with similar models developed for Placer County, and each model is an enhanced version of the SACMET regional model. As a result, the Loomis and Rocklin models reflect development anticipated in Loomis / Rocklin and throughout Sacramento, Placer, Yuba and Yolo Counties by the Year 2030.

Locally, the traffic models assume development permitted under the Town of Loomis and City of Rocklin General Plans, as well as circulation system components anticipated by the City and Town. In both models noteworthy commercial development is assumed in Loomis on the Turtle Island site south of Interstate 80, along Sierra College Blvd and on the Village at Loomis site. Each model assumes that the Doc Barnes Drive extension will be completed to King Road.

Regionally, the traffic models assume major improvements in Rocklin (i.e., Dominguez Road I-80 Overcrossing) as well as the Placer Parkway connecting State Route 99 and State Route 65.

Because two models are available we reviewed current versions of each to determine which is best suited for forecasting traffic volumes on Rocklin Road from Sierra College Blvd to Barton Road. Table 14 presents volumes published in the Loomis Circulation Element Update. Traffic volume forecasts from the Rocklin model are also identified. The Rocklin model has been refined to better reflect the location of commercial development and its access near Interstate 80 and access to Sierra College. Based on the updates made and the fact that Rocklin model's slightly greater projections would represent a "worst case" condition, the Rocklin model has been used as the basis for cumulative analysis.

TABLE 14
COMPARISON OF CUMULATIVE DAILY TRAFFIC VOLUMES

Model	Road	from	to	Adjusted 2030 Volumes
Loomis Circulation Element	Rocklin Road	Town limits	Barton Road	17,800
	Barton Road	Rocklin Road		4,200
		Wells Avenue	Indian Springs Road	12,100
Rocklin traffic model	Rocklin Road	Town limits	Barton Road	18,675 to 18,725
	Barton Road	Rocklin Road		4,650
		Rocklin Road	Wells Avenue	13,770
		Wells Avenue	Indian Springs Road	10,850

Approach to Developing Cumulative (i.e., Year 2030) Traffic Volume Forecasts

The technical approach employed to use model results to create future intersection turning movements for study area intersections employed the “incremental” approach used for most analyses that employ the SACMET regional model.

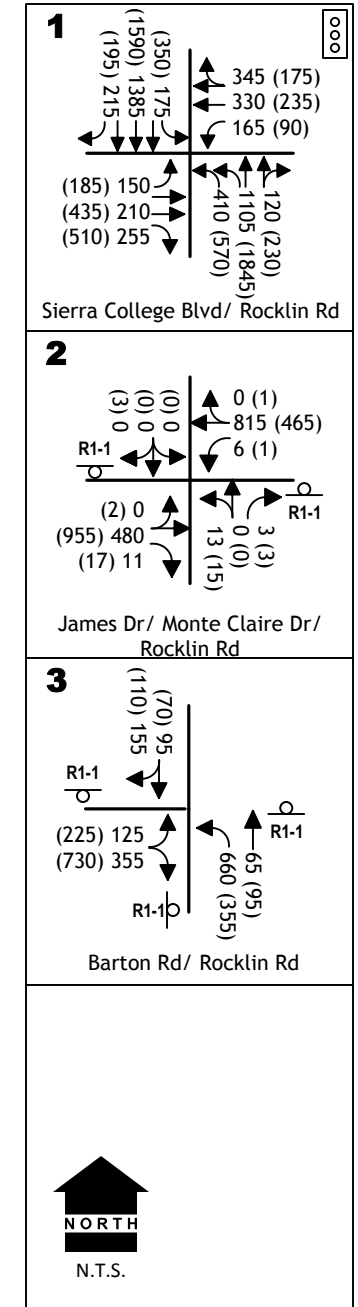
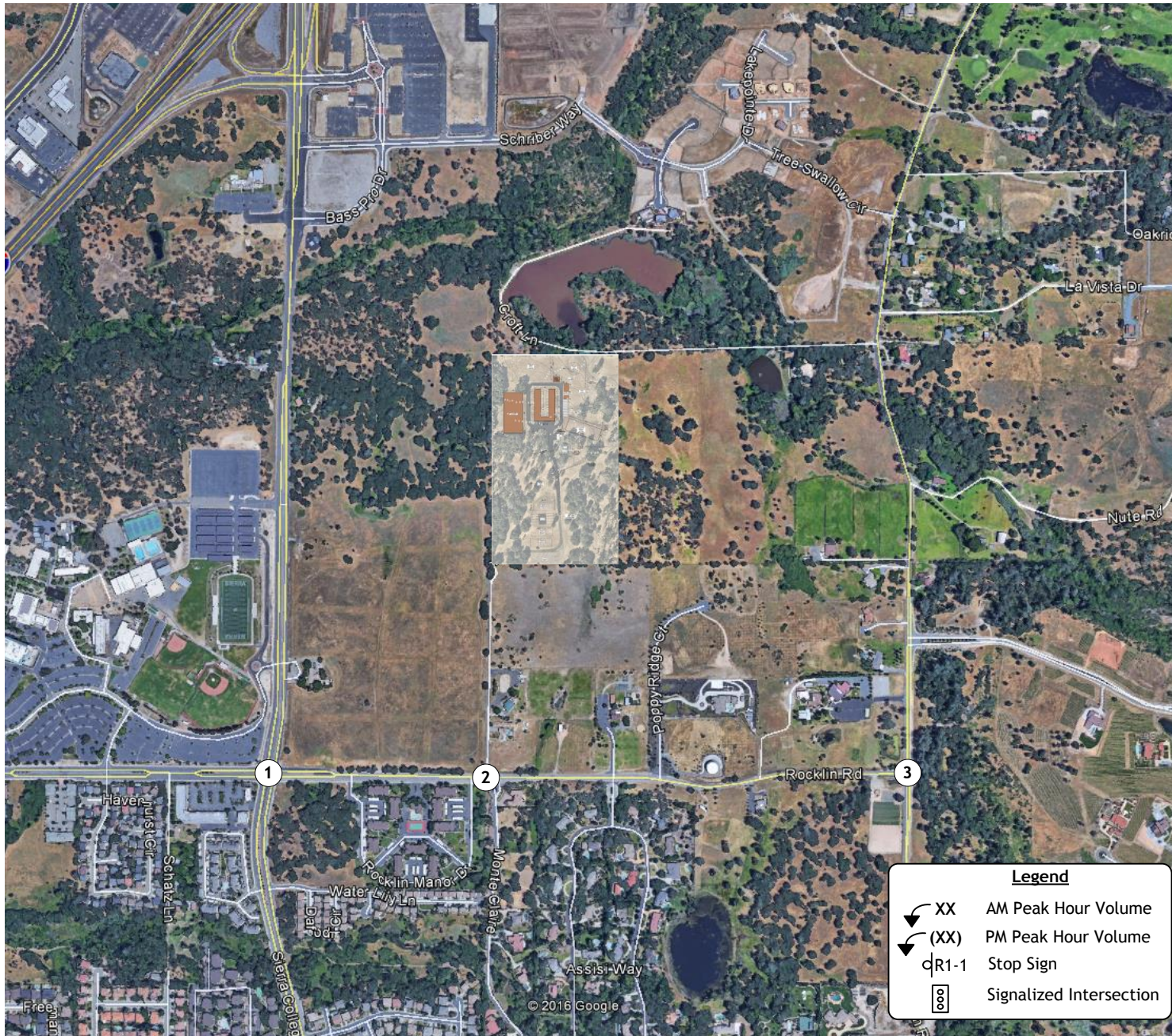
The traffic model was run for these scenarios:

- 1 Existing baseline that reflects recent development,
- 2 Year 2030 Cumulative with other development but no development on the Flying Change Farms site.

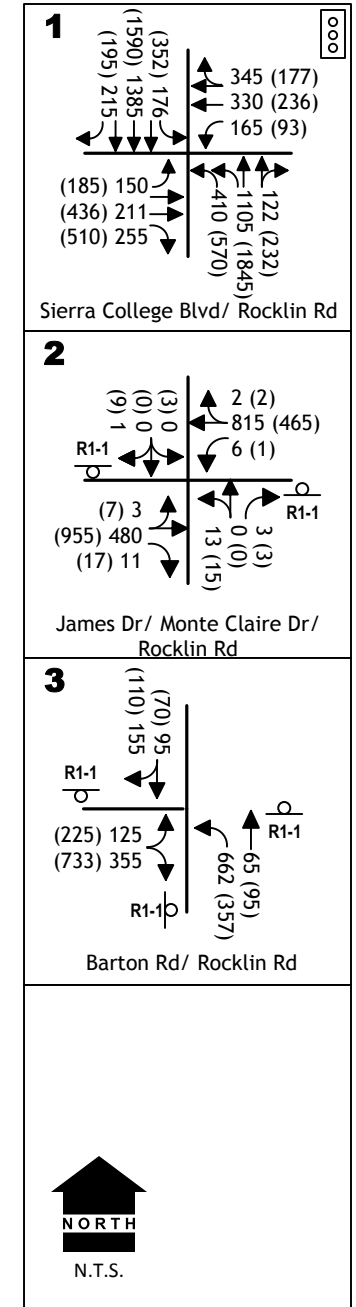
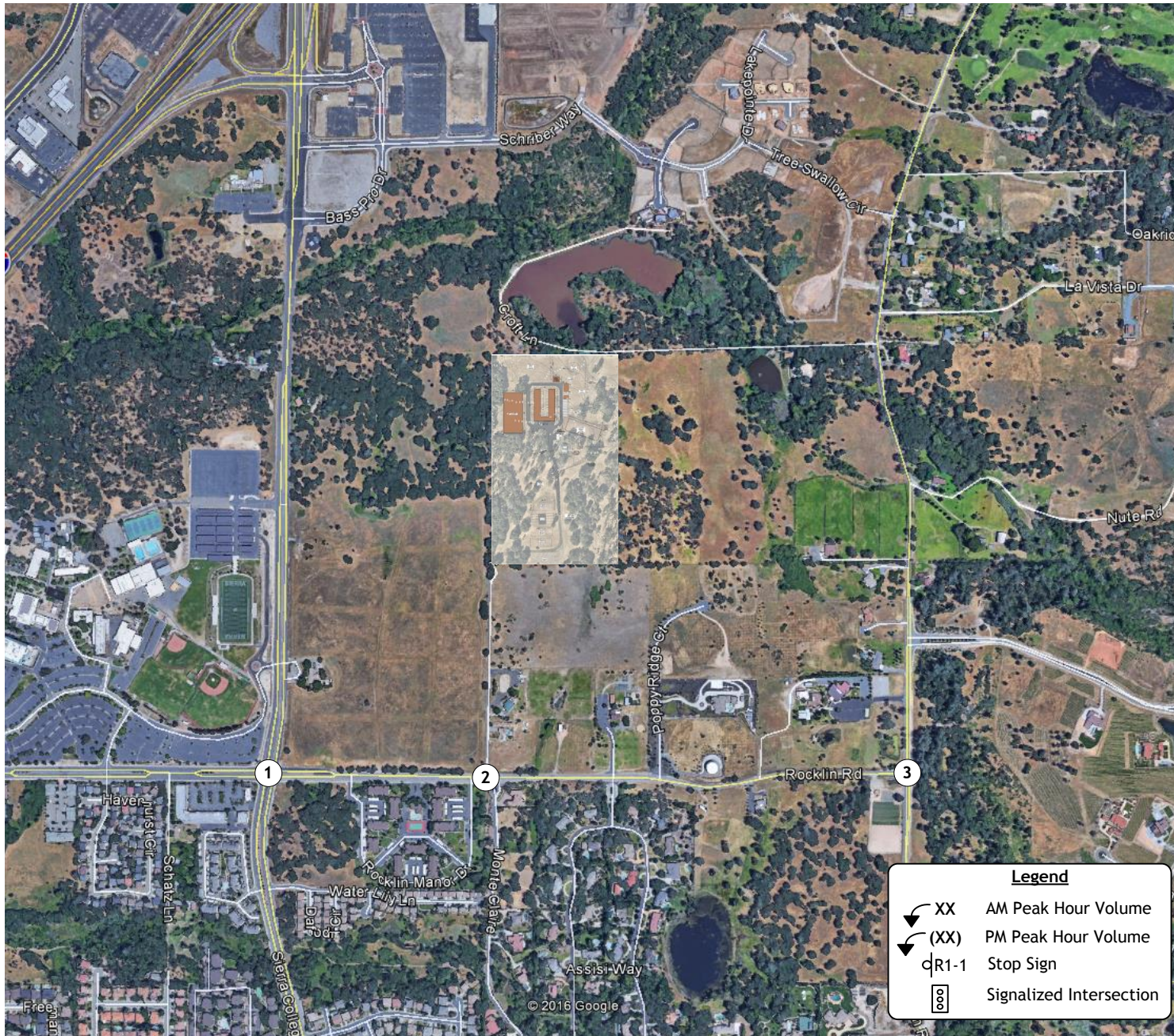
The future daily and peak hour model forecasts were compared to the model’s baseline year forecasts, and the net difference in volumes was determined. These net changes were then added or subtracted from the current peak hour approach and daily segment volumes to create adjusted Year 2030 volumes.

Existing and adjusted Year 2030 traffic volumes were then compared to identify equivalent growth rates for roadway segments and for intersection approaches for use in creating intersection turning movement volumes. To create peak hour intersection turning movements, the segment growth factors were applied to observed peak hour volumes and the results were balanced to best approximate conditions on each leg using the methodologies contained in the Transportation Research Board’s (TRB’s) NCHRP Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design*. This approach reflects the fact that the development of various land uses may affect current travel patterns by adding new traffic, while new roadways may provide alternative routes for existing traffic.

Traffic Volume Forecasts. Figures 8 and 9 identify cumulative Year 2030 traffic volumes at study intersections with and without the Flying Change Farms project.



CUMULATIVE WITHOUT PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS



CUMULATIVE WITH PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

Cumulative Circulation System

Various plans and programs identify improvements that will be made to the study area circulation system.

Projects in Town of Loomis Impact Fees. The Town of Loomis has a traffic impact fee program intended to address the impacts of future development that originated in 2005.

The existing Town of Loomis Traffic Impact Mitigation Fee Program addresses study area roads, as noted in Table 15. The program assumes that Town fees will not fund all of the cost of designated improvements. However, some of these improvements were reconsidered in the Town's pending Circulation Element Update. For example, the fee program identifies a portion of the cost of a traffic signal at the Barton Road / Rocklin Road intersection. The Draft Circulation Element Update suggests a roundabout be installed instead. The Town's prior General Plan Circulation Element identifies Rocklin Road as an ultimate four lane facility, while the updated Circulation Element Update suggests a three-lane facility will be adequate.

No Project Year 2030 Traffic Volumes and Levels of Service

Conditions at Intersections. As noted in Table 15, if the proposed project does not proceed, and no improvements are made then peak hour traffic conditions would reach LOS F and exceed the City of Rocklin's LOS C standard at the Rocklin Road / Sierra College Blvd intersection and Town of Loomis' minimum LOS C standard at the Rocklin Road / Barton Road intersection.

At the **Rocklin Road / Sierra College Blvd intersection** improvements anticipated in the City of Rocklin General Plan and addressed by the SPRTA fee program or normally required of fronting development will deliver LOS C, including:

- a. Widen northbound Sierra College Blvd to provide a third through lane and a separate right turn lane.
- b. Widen southbound Sierra College Blvd to provide dual left turn lanes.
- b. Widen westbound Rocklin Road to provide a separate right turn lane.
- c. Reconfigure the eastbound approach to create an overlap phase for the right turn lane (NB left EB right concurrent).

At the **Rocklin Road / Barton Road** intersection the Town anticipates a roundabout intersection. A single lane roundabout with an eastbound to southbound bypass lane would deliver LOS C.

As the volume of traffic increases on Rocklin Road the length of delays at stop controlled intersections will increase, and LOS D-E is forecast at the **Monte Claire Drive approach**. Forecast traffic volumes fall far below warrants for a traffic signal, and while a roundabout might be installed to improve the Level of service, the cost would be prohibitive (i.e., \$1.5 million \pm).

The circulation element suggests that in the future “moderate access controls” may be needed, and in this case such controls could include prohibitions on outbound left turns onto Rocklin Road.

Conditions on Roadway Segments. Table 16 identifies Year 2030 daily traffic volume forecasts for Rocklin Road under Cumulative No Project conditions. Resulting Levels of Service are also identified. As indicated the two two-lane segments are projected to operate with Levels of Service in excess of the Town’s LOS C threshold.

As indicated, the volume of traffic on Rocklin Road is expected to increase appreciably. Based on the General Plan Circulation Element’s capacities, the LOS F conditions would occur if no improvements are made. As noted earlier Level of Service could be improved by widening the road to City of Rocklin’s 4-lane standard as development occurs within the City and by improving the road to the Town Circulation Element’s three-lane section. However, east of James Drive, the roadway would still operate at LOS D with a three-lane section.

TABLE 15
CUMULATIVE – YEAR 2030 PLUS PROJECT INTERSECTION LEVEL OF SERVICE

Intersection	Control	AM Peak Hour				PM Peak Hour			
		Cumulative		Cumulative Plus Project		Cumulative		Cumulative Plus Project	
		Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS	Vol / Cap or Ave Delay (sec/veh)	LOS
Rocklin Road / Sierra College Blvd	Signal	0.884	D	0.886	D	1.371	F	1.375	F
	Improved	0.769	C	0.769	C	0.794	C	0.796	C
Rocklin Road / James Drive / Monte Claire Drive Northbound Approach Southbound Approach	NB / SB Stop	34.6	D	35.1	E	45.6	E	47.6	E
		-	-	15.4	C	11.4	B	20.6	C
Rocklin Road / Barton Road	All-Way Stop	133.3	F	134.4	F	199.5	F	201.5	F
	Roundabout	15.0	B	15.1	C	23.4	C	23.7	C
BOLD values exceed the minimum LOS standard									

TABLE 16
CUMULATIVE – YEAR 2030 PLUS PROJECT DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE

Roadway	Segment	# of Lanes	Cumulative			Cumulative Plus Project			
			Average Daily Traffic	Vol / Cap Ratio*	LOS	Average Daily Traffic		Vol / Cap ratio	LOS
						Project Only	Total		
Rocklin Road	Sierra College Blvd to Project (Rocklin)	2	18,675	1.245	F	90	18,765	1.251	F
	Project to Barton Road (Loomis)	2	18,725	1.248	F	49	18,774	1.252	F
	Improved per Circulation Element	3**		0.832	D			0.834	D
(*) based on General Plan threshold capacity of 15,000 ADT for two lane road (**) based on capacity of three-lane roadway with roundabouts and moderate access controls									

Cumulative - Year 2030 Plus Project Traffic Volumes and Levels of Service

Conditions at Intersections. If the proposed project proceeds, then peak hour traffic conditions would exceed the City of Rocklin and the Town of Loomis' minimum LOS C standard at the same locations identified under the No Project condition, per Table 15.

The **Rocklin Road / Sierra College Blvd intersection** is projected to operate at LOS D during the a.m. peak hour and LOS F in the p.m. peak hour with and without the project. Under City of Rocklin policy the significance of the project's impact is determined based on the relative traffic increase caused by the project. In this case the project increases the pm peak hour volume at the intersection by 0.2%. This is less than the 5% increment allowed by the City of Rocklin, and as a result the project's cumulative impact is not significant, and mitigation is not required.

At the **Rocklin Road / Barton Road intersection** the project will lengthen delays slightly but LOS F conditions are forecast with and without the project. The project's trips represent 0.3% of the intersection volume. The same improvements needed for the No Project condition (i.e., a roundabout) will yield LOS C with the project. Because intersection improvements are included in the existing fee program, the proposed project will contribute its fair share to the cost of this improvement by paying Town impact fees. No additional mitigation is required.

The project's traffic will increase the length of delays on the **Monte Claire Drive approach to Rocklin Road** opposite the James Drive access. This approach will operate at LOS E in the p.m. peak hour with and without the proposed project. However, the proposed project adds only 6 a.m. and 16 p.m. peak hour trips to the intersection. This represents only 0.5% of the background volume in the a.m. peak hour and 1.1% of the background volume in the p.m. peak hour. As these increases do not reach the 5.0% threshold of significance, the project's impact is not significant under CEQA.

Conditions on Roadway Segments. Table 16 identifies Year 2030 daily traffic volume forecasts for the Cumulative Plus Project condition. Resulting Levels of Service are also identified. As indicated the Rocklin Road segments are projected to operate with Levels of Service in excess of the Town's LOS C threshold.

As indicated, the volume of traffic on **Rocklin Road** is expected to increase slightly due to the project. Based on the General Plan Circulation element's capacities, the two-lane road will operate at LOS F with and without the project. However, as noted previously, the project's trips from James Drive to Barton Road represents only 0.3% of the roadway capacity. Because this change is less than the 5% increment allowed by the Town of Loomis, the project's cumulative impact to Rocklin Road is not significant, and mitigation is not required.

TECHNICAL APPENDIX

FOR

FLYING CHANGE FARMS
TRAFFIC IMPACT ANALYSIS
Loomis, California

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April 6, 2018

Job No. 0095-01

KD Anderson & Associates, Inc.

Transportation Engineers

KD ANDERSON & ASSOCIATES, INC.

(916) 660-1555

XXXX-XX

Rocklin, CA
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : James Dr/Monte Claire & Rocklin Rd
Date : 3/22/2017

Unshifted Count = All Vehicles & Uturns

	James Dr/Monte Claire Southbound					Rocklin Road Westbound					James Dr/Monte Claire Northbound					Rocklin Road Eastbound					Total	Uturns Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	0	0	0	0	0	61	0	0	61	2	0	0	0	2	0	47	0	0	47	110	0
7:15	0	0	1	0	1	0	74	0	0	74	3	0	1	0	4	0	60	0	0	60	139	0
7:30	0	0	0	0	0	0	92	0	0	92	1	0	0	0	1	0	69	0	0	69	162	0
7:45	0	0	0	0	0	2	123	0	0	125	3	0	0	0	3	0	83	2	0	85	213	0
Total	0	0	1	0	1	2	350	0	0	352	9	0	1	0	10	0	259	2	0	261	624	0
8:00	0	0	0	0	0	0	135	0	0	135	2	0	2	0	4	0	84	3	0	87	226	0
8:15	0	0	0	0	0	3	101	0	0	104	3	0	1	0	4	0	107	3	0	110	218	0
8:30	0	0	0	0	0	1	121	0	0	122	2	0	0	0	2	0	61	2	0	63	187	0
8:45	0	0	0	0	0	0	99	0	0	99	2	0	0	0	2	0	68	2	0	70	171	0
Total	0	0	0	0	0	4	456	0	0	460	9	0	3	0	12	0	320	10	0	330	802	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	90	0	0	90	0	0	0	0	0	0	115	3	0	118	208	0
16:15	0	0	0	0	0	1	83	0	0	84	0	0	1	0	1	0	94	0	0	94	179	0
16:30	0	0	0	0	0	1	78	0	0	79	1	0	1	0	2	0	83	3	0	86	167	0
16:45	0	0	0	0	0	1	90	0	0	91	4	0	0	0	4	0	97	3	0	100	195	0
Total	0	0	0	0	0	3	341	0	0	344	5	0	2	0	7	0	389	9	0	398	749	0
17:00	0	0	0	0	0	1	82	0	0	83	2	0	1	0	3	0	90	1	0	91	177	0
17:15	0	0	2	0	2	0	87	0	0	87	1	0	1	0	2	1	130	3	0	134	225	0
17:30	0	0	0	0	0	0	91	1	0	92	4	0	0	0	4	0	99	5	0	104	200	0
17:45	0	0	1	0	1	0	89	0	0	89	6	0	1	0	7	1	97	5	0	103	200	0
Total	0	0	3	0	3	1	349	1	0	351	13	0	3	0	16	2	416	14	0	432	802	0
Grand Total	0	0	4	0	4	10	1496	1	0	1507	36	0	9	0	45	2	1384	35	0	1421	2977	0
Apprch %	0.0%	0.0%	100.0%	0.0%		0.7%	99.3%	0.1%	0.0%		80.0%	0.0%	20.0%	0.0%		0.1%	97.4%	2.5%	0.0%			
Total %	0.0%	0.0%	0.1%	0.0%	0.1%	0.3%	50.3%	0.0%	0.0%	50.6%	1.2%	0.0%	0.3%	0.0%	1.5%	0.1%	46.5%	1.2%	0.0%	47.7%	100.0%	

AM PEAK HOUR	James Dr/Monte Claire Southbound					Rocklin Road Westbound					James Dr/Monte Claire Northbound					Rocklin Road Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	2	123	0	0	125	3	0	0	0	3	0	83	2	0	85	213
8:00	0	0	0	0	0	0	135	0	0	135	2	0	2	0	4	0	84	3	0	87	226
8:15	0	0	0	0	0	3	101	0	0	104	3	0	1	0	4	0	107	3	0	110	218
8:30	0	0	0	0	0	1	121	0	0	122	2	0	0	0	2	0	61	2	0	63	187
Total Volume	0	0	0	0	0	6	480	0	0	486	10	0	3	0	13	0	335	10	0	345	844
% App Total	0.0%	0.0%	0.0%	0.0%		1.2%	98.8%	0.0%	0.0%		76.9%	0.0%	23.1%	0.0%		0.0%	97.1%	2.9%	0.0%		
PHF	.000	.000	.000	.000	.000	.500	.889	.000	.000	.900	.833	.000	.375	.000	.813	.000	.783	.833	.000	.784	.934

NOON PEAK	James Dr/Monte Claire Southbound					Rocklin Road Westbound					James Dr/Monte Claire Northbound					Rocklin Road Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

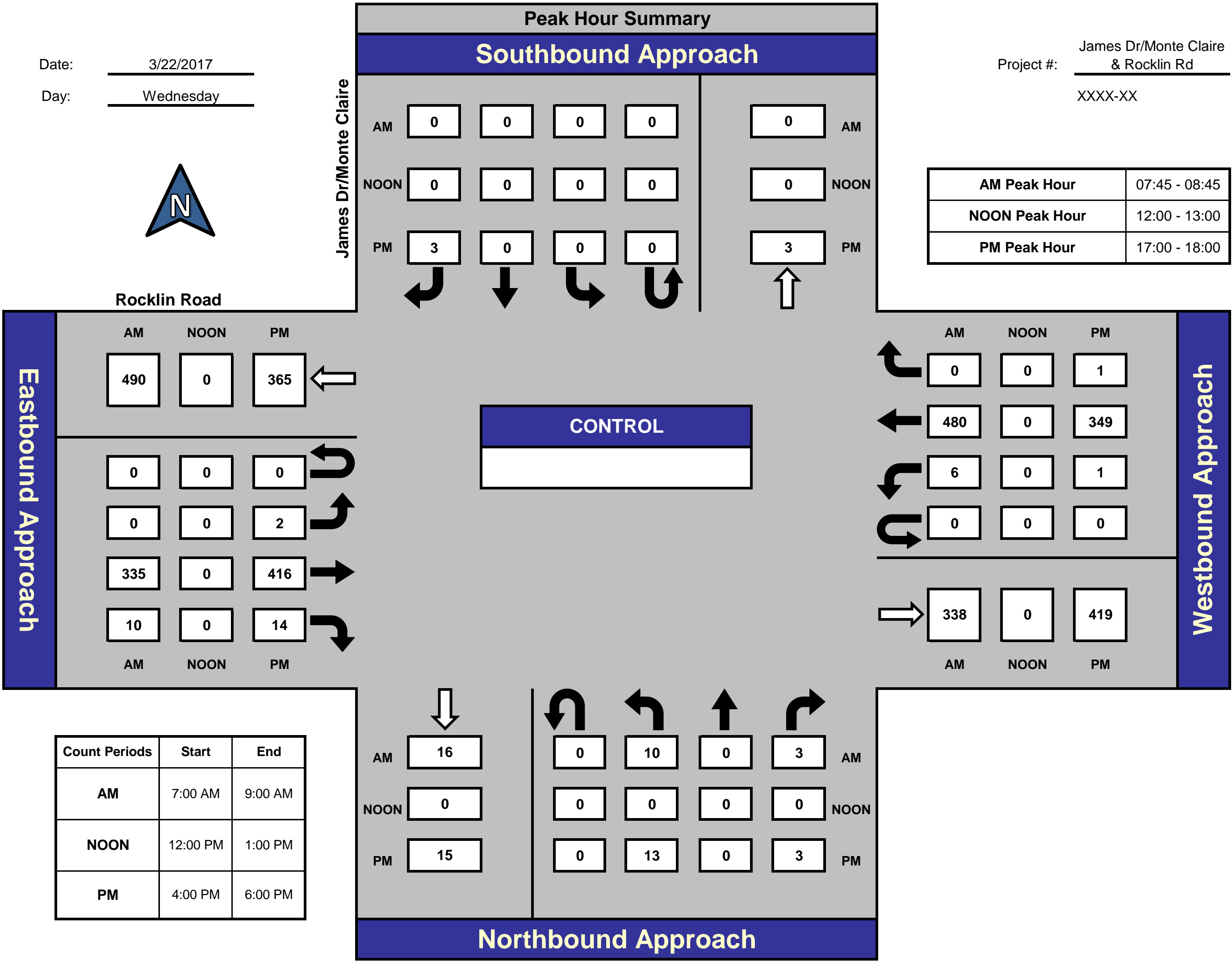
PM PEAK HOUR	James Dr/Monte Claire Southbound					Rocklin Road Westbound					James Dr/Monte Claire Northbound					Rocklin Road Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	1	82	0	0	83	2	0	1	0	3	0	90	1	0	91	177
17:15	0	0	2	0	2	0	87	0	0	87	1	0	1	0	2	1	130	3	0	134	225
17:30	0	0	0	0	0	0	91	1	0	92	4	0	0	0	4	0	99	5	0	104	200
17:45	0	0	1	0	1	0	89	0	0	89	6	0	1	0	7	1	97	5	0	103	200
Total Volume	0	0	3	0	3	1	349	1	0	351	13	0	3	0	16	2	416	14	0	432	802
% App Total	0.0%	0.0%	100.0%	0.0%		0.3%	99.4%	0.3%	0.0%		81.3%	0.0%	18.8%	0.0%		0.5%	96.3%	3.2%	0.0%		
PHF	.000	.000	.375	.000	.375	.250	.959	.250	.000	.954	.542	.000	.750	.000	.571	.500	.800	.700	.000	.806	.891

James Dr/Monte Claire & Rocklin Rd

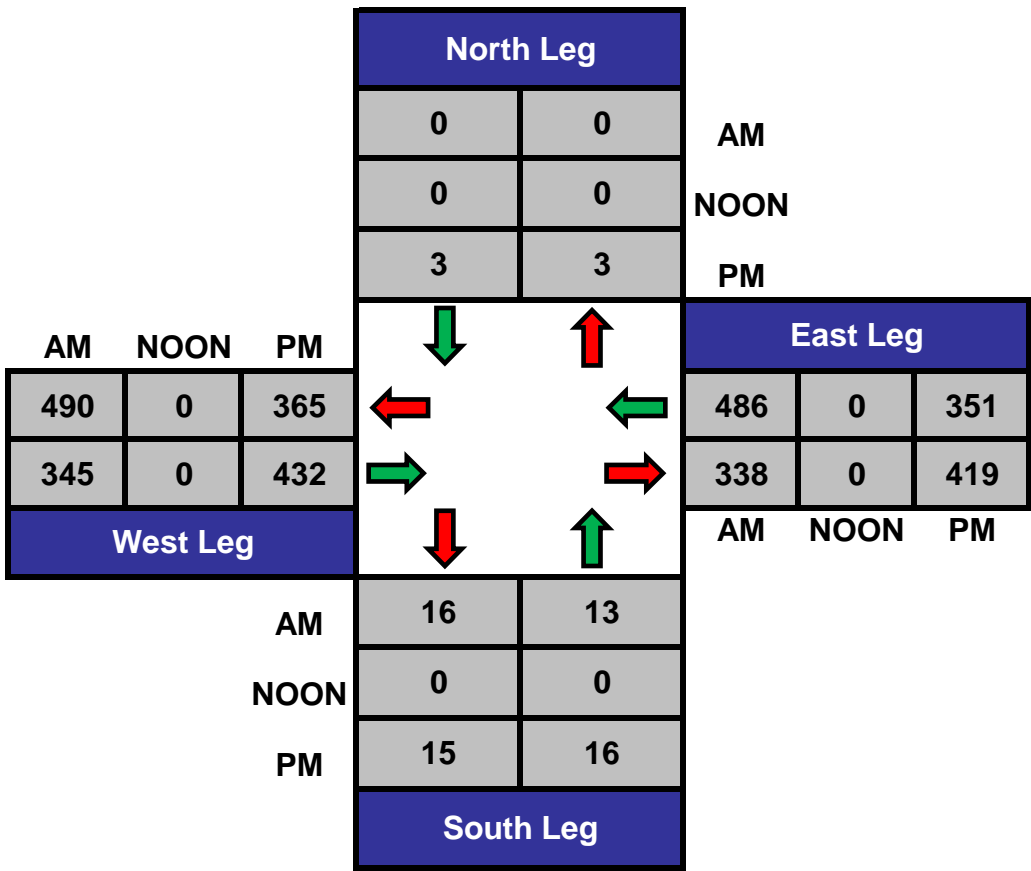
Date: 3/22/2017
Day: Wednesday



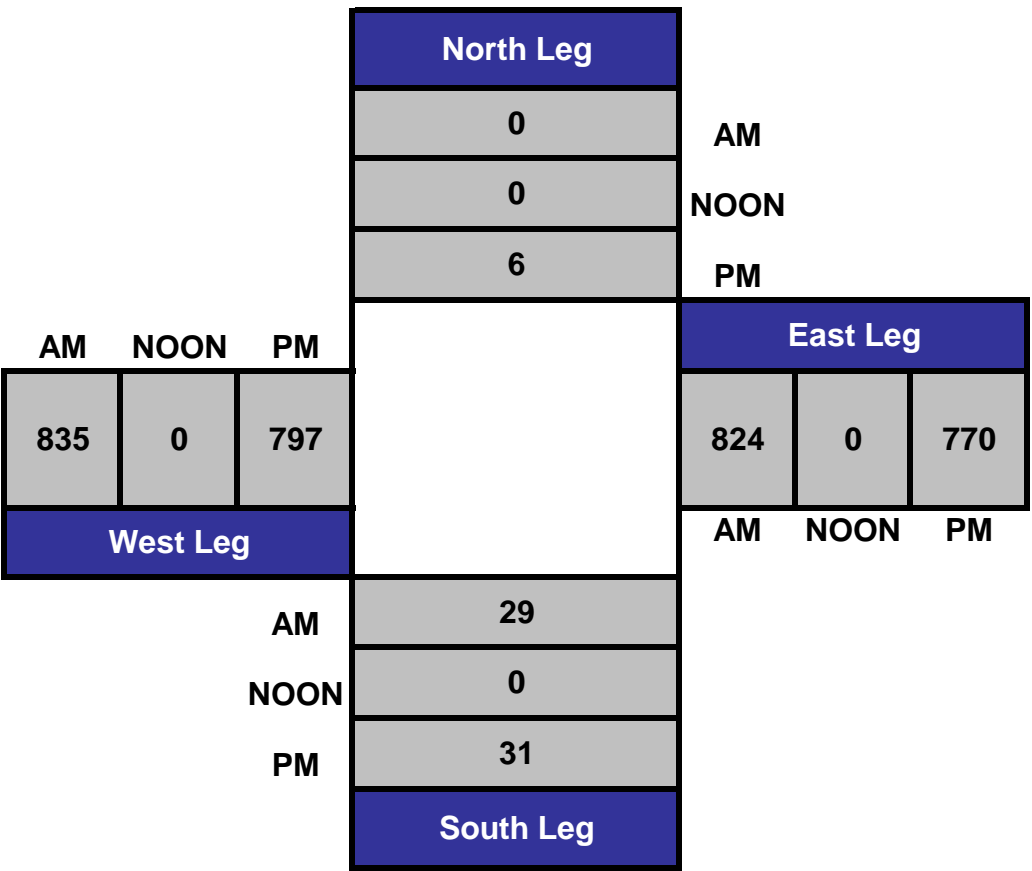
Project #: James Dr/Monte Claire & Rocklin Rd
XXXX-XX



Total Ins & Outs



Total Volume Per Leg



Citrus Heights
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

KD ANDERSON & ASSOCIATES, INC.

(916) 660-1555

0095-01

File Name : Cardwell Ave & Equestrian Access
Date : 1/16/2018

Unshifted Count = All Vehicles & Uturns

	Cardwell Ave Southbound					Equestrian Access Westbound					Cardwell Ave Northbound					Equestrian Access Eastbound					Total	Uturns Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	0
7:45	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	6	0
Total	0	4	0	0	4	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	11	0
8:00	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
8:15	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4	0
8:30	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2	0
8:45	0	1	0	0	1	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	6	0
Total	0	6	1	0	7	0	0	1	0	1	0	5	3	0	8	0	0	0	0	0	16	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	3	0	0	0	3	0	1	1	0	2	0	0	0	0	0	5	0
16:15	0	2	0	0	2	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	6	0
16:30	0	2	0	0	2	1	0	1	0	2	0	1	2	0	3	0	0	0	0	0	7	0
16:45	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5	0
Total	0	4	0	0	4	8	0	1	0	9	0	4	6	0	10	0	0	0	0	0	23	0
17:00	0	1	0	0	1	3	0	0	0	3	0	2	1	0	3	0	0	0	0	0	7	0
17:15	0	0	1	0	1	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3	0
17:30	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
17:45	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0
Total	0	2	1	0	3	5	0	0	0	5	0	3	3	0	6	0	0	0	0	0	14	0
Grand Total	0	16	2	0	18	14	0	2	0	16	0	18	12	0	30	0	0	0	0	0	64	0
Apprch %	0.0%	88.9%	11.1%	0.0%		87.5%	0.0%	12.5%	0.0%		0.0%	60.0%	40.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		
Total %	0.0%	25.0%	3.1%	0.0%	28.1%	21.9%	0.0%	3.1%	0.0%	25.0%	0.0%	28.1%	18.8%	0.0%	46.9%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Cardwell Ave Southbound					Equestrian Access Westbound					Cardwell Ave Northbound					Equestrian Access Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
7:45	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	6
8:00	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:15	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total Volume	0	8	1	0	9	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	18
% App Total	0.0%	88.9%	11.1%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.667	.250	.000	.563	.250	.000	.000	.000	.250	.000	.667	.000	.000	.667	.000	.000	.000	.000	.000	.750

NOON PEAK	Cardwell Ave Southbound					Equestrian Access Westbound					Cardwell Ave Northbound					Equestrian Access Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

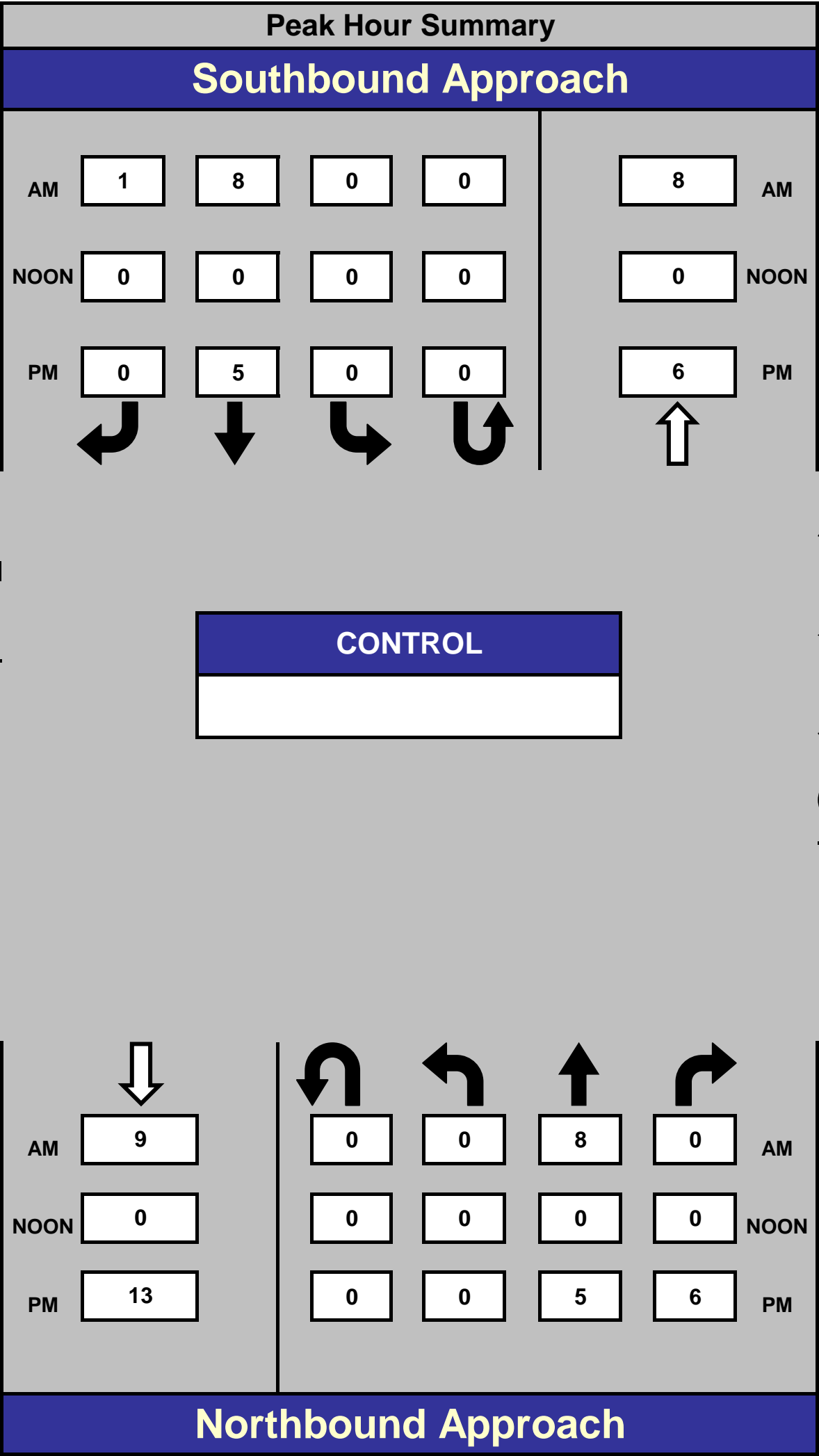
PM PEAK HOUR	Cardwell Ave Southbound					Equestrian Access Westbound					Cardwell Ave Northbound					Equestrian Access Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	0	2	0	0	2	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	6
16:30	0	2	0	0	2	1	0	1	0	2	0	1	2	0	3	0	0	0	0	0	7
16:45	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5
17:00	0	1	0	0	1	3	0	0	0	3	0	2	1	0	3	0	0	0	0	0	7
Total Volume	0	5	0	0	5	8	0	1	0	9	0	5	6	0	11	0	0	0	0	0	25
% App Total	0.0%	100.0%	0.0%	0.0%		88.9%	0.0%	11.1%	0.0%		0.0%	45.5%	54.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.625	.000	.000	.625	.667	.000	.250	.000	.750	.000	.625	.750	.000	.917	.000	.000	.000	.000	.000	.893

Cardwell Ave & Equestrian Access

Date: 1/16/2018
Day: Tuesday



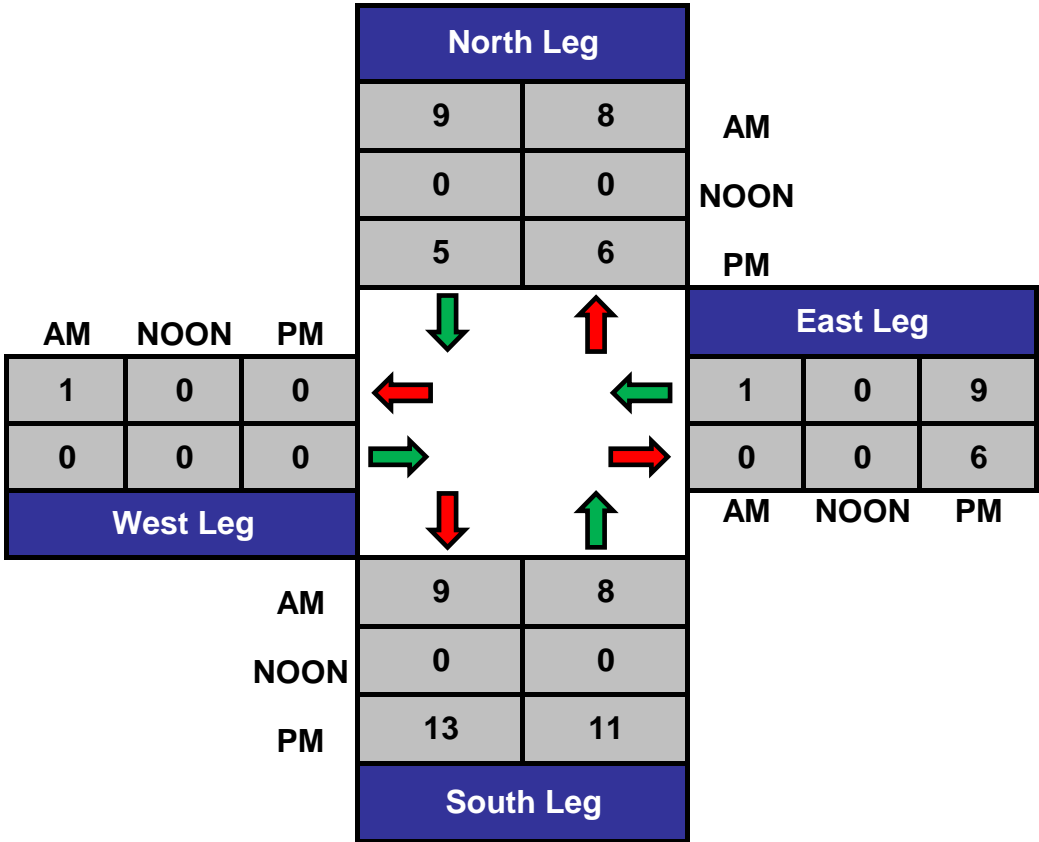
Project #: Cardwell Ave & Equestrian Access
0095-01



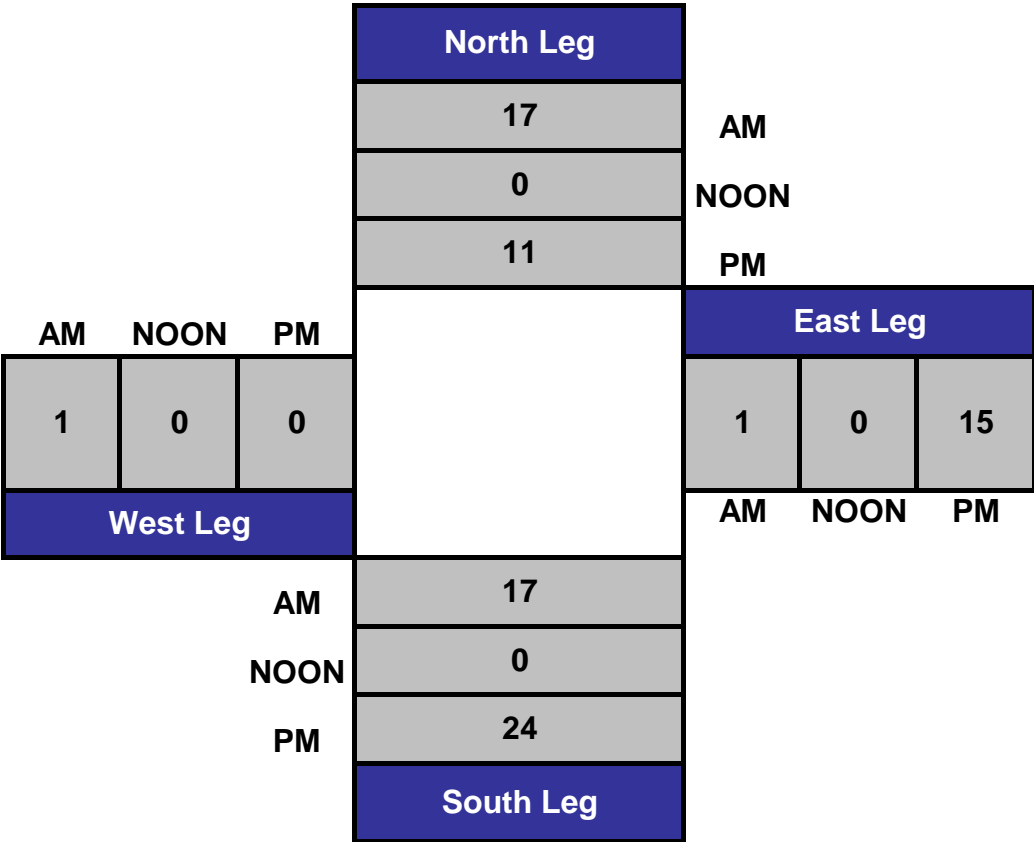
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:15 - 17:15

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Scenario Report

Scenario: EX AM

Command: Default Command

Volume: EX AM CIRC ELEMENT

Geometry: EXISTING

Impact Fee: Default Impact Fee

Trip Generation: AM SECRET RAVINE

Trip Distribution: CURRENT

Paths: NO CLOVER

Routes: Default Route

Configuration: Default Configuration

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Trip Generation Report

Forecast for AM SECRET RAVINE

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total % Of Trips Total
26	flying gate	1.00	stable	5.00	1.00	5	1	6 100.0
	Zone 26 Subtotal					5	1	6 100.0
TOTAL						5	1	6 100.0

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Trip Distribution Report

Percent Of Trips CURRENT

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	11.0	4.0	24.0	11.0	10.0	8.0	0.0	14.0	6.0	0.0	0.0
2	10.0	0.0	20.0	0.0	0.0	0.0	55.0	0.0	0.0	10.0	5.0
6	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
27	1.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	36.0	7.0	10.0	0.0	9.0	9.0	0.0	0.0	7.0	0.0
10	0.0	2.0	18.0	14.0	2.0	0.0	3.0	7.0	35.0	7.0	7.0
11	0.0	2.0	22.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
12	0.0	4.0	20.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
14	0.0	10.0	14.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
15	0.0	0.0	73.0	10.0	0.0	0.0	0.0	0.0	10.0	7.0	0.0
18	0.0	65.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0
19	0.0	36.0	7.0	10.0	0.0	9.0	5.0	4.0	0.0	7.0	0.0
20	0.0	0.0	15.0	15.0	0.0	0.0	10.0	10.0	25.0	15.0	5.0
21	0.0	0.0	8.0	15.0	2.0	0.0	6.0	7.0	0.0	7.0	40.0
22	70.0	0.0	0.0	2.0	0.0	10.0	5.0	5.0	0.0	7.0	0.0

 EXISTING PLUS PROJECT ALONE
 flying gate stables 0095-01 AEROMETALS

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
23	0.0	0.0	0.0	10.0	0.0	0.0	5.0	5.0	0.0	5.0	0.0
24	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
25	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
26	0.0	0.0	25.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	6.0	7.0	10.0	0.0	9.0	9.0	0.0	30.0	7.0	0.0
28	0.0	0.0	0.0	10.0	0.0	57.5	5.0	5.0	15.0	0.0	2.5
29	0.0	0.0	0.0	10.0	0.0	50.0	5.0	5.0	30.0	0.0	0.0
30	0.0	0.0	0.0	10.0	0.0	60.0	5.0	5.0	12.5	0.0	2.5
31	0.0	0.0	10.0	10.0	0.0	22.5	5.0	5.0	15.0	5.0	2.5
32	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0	0.0	10.0	45.0

Zone	To Gates	
	23	26
1	0.0	0.0
2	0.0	0.0
6	0.0	0.0
7	0.0	0.0
9	0.0	0.0
10	5.0	0.0
11	2.0	0.0
12	2.0	0.0
14	2.0	0.0
15	0.0	0.0
18	0.0	0.0
19	0.0	0.0
20	5.0	0.0
21	15.0	0.0
22	1.0	0.0
23	0.0	0.0
24	20.0	0.0
25	20.0	0.0
26	35.0	0.0
27	5.0	0.0
28	5.0	0.0
29	0.0	0.0
30	5.0	0.0
31	5.0	0.0
32	10.0	5.0

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Turning Movement Report
AM SECRET RAVINE

Volume	Northbound			Southbound			Eastbound			Westbound			Total
Type	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
#6 Rocklin Rd / Sierra College Blvd													
Base	404	547	78	82	662	150	102	188	234	92	270	141	2950
Added	0	0	2	1	0	0	0	1	0	0	0	0	4
Total	404	547	80	83	662	150	102	189	234	92	270	141	2954
#515 ROCKLIN ROAD / BARTON ROAD													
Base	386	49	0	0	57	86	96	0	225	0	0	0	899
Added	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	388	49	0	0	57	86	96	0	225	0	0	0	901
#617 rocklin road / james lane													
Base	10	0	3	0	0	0	0	335	10	6	480	0	844
Added	0	0	0	0	0	1	3	0	0	0	0	2	6
Total	10	0	3	0	0	1	3	335	10	6	480	2	850

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.530
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	1	1	0	1	1	0	2	0	1	1	0

Volume Module:

Base Vol:	404	547	78	82	662	150	102	188	234	92	270	141
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	404	547	78	82	662	150	102	188	234	92	270	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	404	547	78	82	662	150	102	188	234	92	270	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	547	78	82	662	150	102	188	234	92	270	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	444	547	78	82	662	150	102	188	234	92	270	141

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.75	0.25	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.31	0.69
Final Sat.:	2900	2538	362	1450	4350	1450	1450	2900	1450	1450	1905	995

Capacity Analysis Module:

Vol/Sat:	0.15	0.22	0.22	0.06	0.15	0.10	0.07	0.06	0.16	0.06	0.14	0.14
Crit Volume:	222			221					234	92		
Crit Moves:	****			****					****	****		

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.530
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	1	1	0	0	1	0	2	0	1	0

Volume Module:

Base Vol:	404	547	78	82	662	150	102	188	234	92	270	141
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	404	547	78	82	662	150	102	188	234	92	270	141
Added Vol:	0	0	2	1	0	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	404	547	80	83	662	150	102	189	234	92	270	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	404	547	80	83	662	150	102	189	234	92	270	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	547	80	83	662	150	102	189	234	92	270	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	444	547	80	83	662	150	102	189	234	92	270	141

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.74	0.26	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.31	0.69
Final Sat.:	2900	2530	370	1450	4350	1450	1450	2900	1450	1450	1905	995

Capacity Analysis Module:

Vol/Sat:	0.15	0.22	0.22	0.06	0.15	0.10	0.07	0.07	0.16	0.06	0.14	0.14
Crit Volume:	222			221					234	92		
Crit Moves:	****			****					****	****		

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Scenario Report

Scenario: EXISTING PM

Command: Default Command
Volume: EX PM CIRCULATION ELEMENT
Geometry: EXISTING
Impact Fee: Default Impact Fee
Trip Generation: PM SECRET RAVONE
Trip Distribution: CURRENT
Paths: NO CLOVER
Routes: Default Route
Configuration: Default Configuration

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Trip Generation Report

Forecast for PM SECRET RAVINE

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total % Of Trips Total
26	flying gate	1.00	stable	7.00	9.00	7	9	16 100.0
	Zone 26 Subtotal					7	9	16 100.0
TOTAL						7	9	16 100.0

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Trip Distribution Report

Percent Of Trips CURRENT

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	11.0	4.0	24.0	11.0	10.0	8.0	0.0	14.0	6.0	0.0	0.0
2	10.0	0.0	20.0	0.0	0.0	0.0	55.0	0.0	0.0	10.0	5.0
6	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
27	1.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	36.0	7.0	10.0	0.0	9.0	9.0	0.0	0.0	7.0	0.0
10	0.0	2.0	18.0	14.0	2.0	0.0	3.0	7.0	35.0	7.0	7.0
11	0.0	2.0	22.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
12	0.0	4.0	20.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
14	0.0	10.0	14.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
15	0.0	0.0	73.0	10.0	0.0	0.0	0.0	0.0	10.0	7.0	0.0
18	0.0	65.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0
19	0.0	36.0	7.0	10.0	0.0	9.0	5.0	4.0	0.0	7.0	0.0
20	0.0	0.0	15.0	15.0	0.0	0.0	10.0	10.0	25.0	15.0	5.0
21	0.0	0.0	8.0	15.0	2.0	0.0	6.0	7.0	0.0	7.0	40.0
22	70.0	0.0	0.0	2.0	0.0	10.0	5.0	5.0	0.0	7.0	0.0

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
23	0.0	0.0	0.0	10.0	0.0	0.0	5.0	5.0	0.0	5.0	0.0
24	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
25	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
26	0.0	0.0	25.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	6.0	7.0	10.0	0.0	9.0	9.0	0.0	30.0	7.0	0.0
28	0.0	0.0	0.0	10.0	0.0	57.5	5.0	5.0	15.0	0.0	2.5
29	0.0	0.0	0.0	10.0	0.0	50.0	5.0	5.0	30.0	0.0	0.0
30	0.0	0.0	0.0	10.0	0.0	60.0	5.0	5.0	12.5	0.0	2.5
31	0.0	0.0	10.0	10.0	0.0	22.5	5.0	5.0	15.0	5.0	2.5
32	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0	0.0	10.0	45.0

Zone	To Gates	
	23	26
1	0.0	0.0
2	0.0	0.0
6	0.0	0.0
7	0.0	0.0
9	0.0	0.0
10	5.0	0.0
11	2.0	0.0
12	2.0	0.0
14	2.0	0.0
15	0.0	0.0
18	0.0	0.0
19	0.0	0.0
20	5.0	0.0
21	15.0	0.0
22	1.0	0.0
23	0.0	0.0
24	20.0	0.0
25	20.0	0.0
26	35.0	0.0
27	5.0	0.0
28	5.0	0.0
29	0.0	0.0
30	5.0	0.0
31	5.0	0.0
32	10.0	5.0

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Turning Movement Report
PM SECRET RAVINE

Volume	Northbound			Southbound			Eastbound			Westbound			Total
Type	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
#6 Rocklin Rd / Sierra College Blvd													
Base	290	864	65	144	709	143	200	287	364	42	184	127	3419
Added	0	0	2	2	0	0	0	1	0	3	1	2	11
Total	290	864	67	146	709	143	200	288	364	45	185	129	3430
#515 ROCKLIN ROAD / BARTON ROAD													
Base	267	60	0	0	56	53	57	0	368	0	0	0	861
Added	2	0	0	0	0	0	0	0	3	0	0	0	5
Total	269	60	0	0	56	53	57	0	371	0	0	0	866
#617 rocklin road / james lane													
Base	13	0	3	0	0	3	2	416	14	1	349	1	802
Added	0	0	0	3	0	6	5	0	0	0	0	2	16
Total	13	0	3	3	0	9	7	416	14	1	349	3	818

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Link Volume Report
PM SECRET RAVINE

Volume Type	NB Link			SB Link			EB Link			WB Link			Total Volume
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
#6 Rocklin Rd / Sierra College Blvd													
Base	1219	1115	2334	996	1191	2187	851	617	1468	353	496	849	6838
Added	2	3	5	2	2	4	1	1	2	6	5	11	22
Total	1221	1118	2339	998	1193	2191	852	618	1470	359	501	860	6860
#515 ROCKLIN ROAD / BARTON ROAD													
Base	327	424	751	109	117	226	425	320	745	0	0	0	1722
Added	2	3	5	0	0	0	3	2	5	0	0	0	10
Total	329	427	756	109	117	226	428	322	750	0	0	0	1732
#617 rocklin road / james lane													
Base	16	15	31	3	3	6	432	365	797	351	419	770	1604
Added	0	0	0	9	7	16	5	6	11	2	3	5	32
Total	16	15	31	12	10	22	437	371	808	353	422	775	1636

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.704

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	1	1	0	1	1	0	2	0	1	1

Volume Module:

Base Vol:	290	864	65	144	709	143	200	287	364	42	184	127
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	290	864	65	144	709	143	200	287	364	42	184	127
Added Vol:	0	0	2	2	0	0	0	1	0	3	1	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	290	864	67	146	709	143	200	288	364	45	185	129
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	290	864	67	146	709	143	200	288	364	45	185	129
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	864	67	146	709	143	200	288	364	45	185	129
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	864	67	146	709	143	200	288	364	45	185	129

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.86	0.14	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.18	0.82
Final Sat.:	2900	2691	209	1450	4350	1450	1450	2900	1450	1450	1709	1191

Capacity Analysis Module:

Vol/Sat:	0.11	0.32	0.32	0.10	0.16	0.10	0.14	0.10	0.25	0.03	0.11	0.11
Crit Volume:	466			146			364			45		
Crit Moves:	****			****			****			****		

EXISTING PLUS PROJECT ALONE
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 76 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	1	1	0	1	1	0	2	0	1	1	0

Volume Module:

Base Vol:	290	864	65	144	709	143	200	287	364	42	184	127
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	290	864	65	144	709	143	200	287	364	42	184	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	290	864	65	144	709	143	200	287	364	42	184	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	864	65	144	709	143	200	287	364	42	184	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	864	65	144	709	143	200	287	364	42	184	127

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.86	0.14	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.18	0.82
Final Sat.:	2900	2697	203	1450	4350	1450	1450	2900	1450	1450	1716	1184

Capacity Analysis Module:

Vol/Sat:	0.11	0.32	0.32	0.10	0.16	0.10	0.14	0.10	0.25	0.03	0.11	0.11
Crit Volume:	465			144			364			42		
Crit Moves:	****			****			****			****		

EPAP PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Scenario Report

Scenario: EPAP AM

Command: Default Command
Volume: EX AM CIRC ELEMENT
Geometry: EXISTING
Impact Fee: Default Impact Fee
Trip Generation: AM PEAK
Trip Distribution: CURRENT
Paths: NO CLOVER
Routes: Default Route
Configuration: Default Configuration

EPAP PLUS PROJECT
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Trip Generation Report

Forecast for AM PEAK

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	LOS CERROS	115.00	SFR	0.19	0.56	22	64	86	3.2
	Zone 1 Subtotal					22	64	86	3.2
6	PARK PLACE N	76.00	sfr	0.19	0.56	14	43	57	2.1
	Zone 6 Subtotal					14	43	57	2.1
7	PARK PLACE S	66.00	SFR	0.19	0.56	13	37	50	1.9
	Zone 7 Subtotal					13	37	50	1.9
9	BRIGHTON / G	155.00	SFR	0.19	0.56	29	87	116	4.3
9	BRIGHTON / G	260.00	mfr	0.10	0.41	26	107	133	4.9
	Zone 9 Subtotal					55	194	249	9.3
10	rocklin resi	0.00	SFR	0.19	0.56	0	0	0	0.0
10	rocklin resi	156.00	appr SFR	0.19	0.56	30	87	117	4.3
10	rocklin resi	63.00	4588 barton ro	0.19	0.56	12	35	47	1.7
10	rocklin resi	63.00	Oak Vista	0.19	0.56	12	35	47	1.7
	Zone 10 Subtotal					54	157	211	7.8
11	REMAINING CR	1.00	RETAIL	58.00	35.00	58	35	93	3.5
	Zone 11 Subtotal					58	35	93	3.5
12	REMAINING CO	1.00	RETAIL	24.00	15.00	24	15	39	1.4
	Zone 12 Subtotal					24	15	39	1.4
14	LOWES	1.00	RETAIL	105.00	85.00	105	85	190	7.1
	Zone 14 Subtotal					105	85	190	7.1
15	COLVER VALLE	1.00	development	106.00	313.00	106	313	419	15.6
	Zone 15 Subtotal					106	313	419	15.6
16	SECRET RAVIN	1.00	APARTMENTS	15.00	51.00	15	51	66	2.5
16	SECRET RAVIN	0.00	RETAIL	0.60	0.36	0	0	0	0.0
	Zone 16 Subtotal					15	51	66	2.5
17	SECRET RAVIN	1.00	retail	4.00	3.00	4	3	7	0.3
17	SECRET RAVIN	0.00	bank	4.89	3.69	0	0	0	0.0
17	SECRET RAVIN	1.00	car wash	16.00	17.00	16	17	33	1.2
	Zone 17 Subtotal					20	20	40	1.5
18	ROCKLIN AUDI	34.00	KSF	1.44	0.48	49	16	65	2.4
	Zone 18 Subtotal					49	16	65	2.4
19	GRANITE - DO	71.00	SFR	0.19	0.56	13	40	53	2.0

EPAP PLUS PROJECT
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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 19 Subtotal					13	40	53	2.0
20	rocklin stat	1.00	RETAIL	144.00	122.00	144	122	266	9.9
	Zone 20 Subtotal					144	122	266	9.9
21	Sierra Gatew	195.00	du's	0.10	0.40	20	78	98	3.6
	Zone 21 Subtotal					20	78	98	3.6
22	QUARRY ROW	64.00	SFR	0.19	0.56	12	36	48	1.8
	Zone 22 Subtotal					12	36	48	1.8
23	Rocklin Gate	204.00	MFR	0.10	0.41	20	84	104	3.9
	Zone 23 Subtotal					20	84	104	3.9
24	mont serate	54.00	SFR	0.19	0.56	10	30	40	1.5
	Zone 24 Subtotal					10	30	40	1.5
25	Poppy ridge	6.00	SFR	0.19	0.56	1	3	4	0.1
	Zone 25 Subtotal					1	3	4	0.1
26	flying gate	1.00	stable	5.00	1.00	5	1	6	0.2
	Zone 26 Subtotal					5	1	6	0.2
27	Del Oro,	12.00	SFR	0.19	0.56	2	7	9	0.3
	Zone 27 Subtotal					2	7	9	0.3
28	Taylor Road	1.00	SFR	9.00	26.00	9	26	35	1.3
28	Taylor Road	1.00	retail	11.00	7.00	11	7	18	0.7
	Zone 28 Subtotal					20	33	53	2.0
29	heritage par	40.00	SFR	0.19	0.56	8	22	30	1.1
	Zone 29 Subtotal					8	22	30	1.1
30	Village at L	1.00	Mixed	147.00	248.00	147	248	395	14.7
	Zone 30 Subtotal					147	248	395	14.7
31	Loomis Cross	1.00	commercial	10.00	6.00	10	6	16	0.6
	Zone 31 Subtotal					10	6	16	0.6
32	vacant Monte	5.00	SFR	0.19	0.56	1	3	4	0.1
	Zone 32 Subtotal					1	3	4	0.1
TOTAL						948	1743	2691	100.0

EPAP PLUS PROJECT
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Trip Distribution Report

Percent Of Trips CURRENT

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	11.0	4.0	24.0	11.0	10.0	8.0	0.0	14.0	6.0	0.0	0.0
2	10.0	0.0	20.0	0.0	0.0	0.0	55.0	0.0	0.0	10.0	5.0
6	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
27	1.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	36.0	7.0	10.0	0.0	9.0	9.0	0.0	0.0	7.0	0.0
10	0.0	2.0	18.0	14.0	2.0	0.0	3.0	7.0	35.0	7.0	7.0
11	0.0	2.0	22.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
12	0.0	4.0	20.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
14	0.0	10.0	14.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
15	0.0	0.0	73.0	10.0	0.0	0.0	0.0	0.0	10.0	7.0	0.0
16	0.0	2.0	13.0	24.0	0.0	0.0	7.0	7.0	33.0	7.0	3.0
17	0.0	2.0	11.0	21.0	0.0	0.0	10.0	10.0	25.0	15.0	2.0
18	0.0	65.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0

EPAP PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
19	0.0	36.0	7.0	10.0	0.0	9.0	5.0	4.0	0.0	7.0	0.0
20	0.0	0.0	15.0	15.0	0.0	0.0	10.0	10.0	25.0	15.0	5.0
21	0.0	0.0	8.0	15.0	2.0	0.0	6.0	7.0	0.0	7.0	40.0
22	70.0	0.0	0.0	2.0	0.0	10.0	5.0	5.0	0.0	7.0	0.0
23	0.0	0.0	0.0	10.0	0.0	0.0	5.0	5.0	0.0	5.0	0.0
24	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
25	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
26	0.0	0.0	25.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	6.0	7.0	10.0	0.0	9.0	9.0	0.0	30.0	7.0	0.0
28	0.0	0.0	0.0	10.0	0.0	57.5	5.0	5.0	15.0	0.0	2.5
29	0.0	0.0	0.0	10.0	0.0	50.0	5.0	5.0	30.0	0.0	0.0
30	0.0	0.0	0.0	10.0	0.0	60.0	5.0	5.0	12.5	0.0	2.5
31	0.0	0.0	10.0	10.0	0.0	22.5	5.0	5.0	15.0	5.0	2.5
32	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0	0.0	10.0	45.0

Zone	To Gates	
	23	26
1	0.0	0.0
2	0.0	0.0
6	0.0	0.0
7	0.0	0.0
9	0.0	0.0
10	5.0	0.0
11	2.0	0.0
12	2.0	0.0
14	2.0	0.0
15	0.0	0.0
16	2.0	0.0
17	2.0	0.0
18	0.0	0.0
19	0.0	0.0
20	5.0	0.0
21	15.0	0.0
22	1.0	0.0
23	0.0	0.0
24	20.0	0.0
25	20.0	0.0
26	35.0	0.0
27	5.0	0.0
28	5.0	0.0
29	0.0	0.0
30	5.0	0.0
31	5.0	0.0
32	10.0	5.0

EPAP PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Turning Movement Report
AM PEAK

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#6 Rocklin Rd / Sierra College Blvd													
Base	404	547	78	82	662	150	102	188	234	92	270	141	2950
Added	0	100	4	33	146	28	20	12	0	18	41	53	455
Total	404	647	82	115	808	178	122	200	234	110	311	194	3405
#515 ROCKLIN ROAD / BARTON ROAD													
Base	386	49	0	0	57	86	96	0	225	0	0	0	899
Added	21	9	0	0	18	24	8	0	34	0	0	0	114
Total	407	58	0	0	75	110	104	0	259	0	0	0	1013
#617 rocklin road / james lane													
Base	10	0	3	0	0	0	0	335	10	6	480	0	844
Added	3	0	0	0	0	1	3	41	1	0	45	2	96
Total	13	0	3	0	0	1	3	376	11	6	525	2	940

EXISTING PLUS APPROVED PROJECTS
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.597

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 57 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	1	1	0	3	0	1	1	0	2	0

Volume Module:

Base Vol:	404	547	78	82	662	150	102	188	234	92	270	141
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	404	547	78	82	662	150	102	188	234	92	270	141
Added Vol:	0	100	2	31	146	28	20	11	0	17	41	53
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	404	647	80	113	808	178	122	199	234	109	311	194
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	404	647	80	113	808	178	122	199	234	109	311	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	647	80	113	808	178	122	199	234	109	311	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	444	647	80	113	808	178	122	199	234	109	311	194

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.78	0.22	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.23	0.77
Final Sat.:	2900	2581	319	1450	4350	1450	1450	2900	1450	1450	1786	1114

Capacity Analysis Module:

Vol/Sat:	0.15	0.25	0.25	0.08	0.19	0.12	0.08	0.07	0.16	0.08	0.17	0.17
Crit Volume:	222			269			122			253		
Crit Moves:	****			****			****			****		

EPAP PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.597
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	1	1	0	3	0	1	1	0	2	0	1

Volume Module:

Base Vol:	404	547	78	82	662	150	102	188	234	92	270	141
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	404	547	78	82	662	150	102	188	234	92	270	141
Added Vol:	0	100	4	33	146	28	20	12	0	18	41	53
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	404	647	82	115	808	178	122	200	234	110	311	194
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	404	647	82	115	808	178	122	200	234	110	311	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	404	647	82	115	808	178	122	200	234	110	311	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	444	647	82	115	808	178	122	200	234	110	311	194

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.78	0.22	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.23	0.77
Final Sat.:	2900	2574	326	1450	4350	1450	1450	2900	1450	1450	1786	1114

Capacity Analysis Module:

Vol/Sat:	0.15	0.25	0.25	0.08	0.19	0.12	0.08	0.07	0.16	0.08	0.17	0.17
Crit Volume:	222				269		122				253	
Crit Moves:	****				****		****				****	

EPAP PLUS PROJECT
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Scenario Report

Scenario: EPAP PM

Command: Default Command
Volume: EX PM CIRCULATION ELEMENT
Geometry: EXISTING
Impact Fee: Default Impact Fee
Trip Generation: PM PEAK
Trip Distribution: CURRENT
Paths: NO CLOVER
Routes: Default Route
Configuration: Default Configuration

EPAP PLUS PROJECT
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Trip Generation Report

Forecast for PM PEAK

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	LOS CERROS	115.00	SFR	0.65	0.36	75	41	116	2.8
	Zone 1 Subtotal					75	41	116	2.8
2	Avalon	79.00	SFR	0.65	0.36	51	28	79	1.9
	Zone 2 Subtotal					51	28	79	1.9
6	PARK PLACE N	76.00	sfr	0.63	0.37	48	28	76	1.9
	Zone 6 Subtotal					48	28	76	1.9
7	PARK PLACE S	66.00	SFR	0.63	0.37	42	24	66	1.6
	Zone 7 Subtotal					42	24	66	1.6
9	BRIGHTON / G	155.00	SFR	0.63	0.37	98	57	155	3.8
9	BRIGHTON / G	260.00	mfr	0.40	0.22	104	57	161	3.9
	Zone 9 Subtotal					202	114	316	7.7
10	rocklin resi	0.00	SFR	0.64	0.36	0	0	0	0.0
10	rocklin resi	156.00	appr SFR	0.64	0.36	100	56	156	3.8
10	rocklin resi	63.00	4588 barton ro	0.64	0.36	40	23	63	1.5
10	rocklin resi	63.00	Oak Vista	0.63	0.37	40	23	63	1.5
	Zone 10 Subtotal					180	102	282	6.9
11	REMAINING CR	1.00	RETAIL	175.00	182.00	175	182	357	8.7
	Zone 11 Subtotal					175	182	357	8.7
12	REMAINING CO	1.00	RETAIL	82.00	88.00	82	88	170	4.2
	Zone 12 Subtotal					82	88	170	4.2
14	LOWES	1.00	RETAIL	115.00	130.00	115	130	245	6.0
	Zone 14 Subtotal					115	130	245	6.0
15	COLVER VALLE	1.00	development	377.00	186.00	377	186	563	13.8
	Zone 15 Subtotal					377	186	563	13.8
16	SECRET RAVIN	1.00	APARTMENTS	51.00	30.00	51	30	81	2.0
16	SECRET RAVIN	0.00	RETAIL	1.25	1.35	0	0	0	0.0
	Zone 16 Subtotal					51	30	81	2.0
17	SECRET RAVIN	1.00	retail	13.00	15.00	13	15	28	0.7
17	SECRET RAVIN	0.00	bank	7.90	7.90	0	0	0	0.0
17	SECRET RAVIN	1.00	car wash	30.00	31.00	30	31	61	1.5
	Zone 17 Subtotal					43	46	89	2.2
18	ROCKLIN AUDI	34.00	KSF	1.05	1.57	36	53	89	2.2

EPAP PLUS PROJECT
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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 18 Subtotal					36	53	89	2.2
19	GRANITE - DO	71.00	SFR	0.63	0.37	45	26	71	1.7
	Zone 19 Subtotal					45	26	71	1.7
20	rocklin stat	1.00	RETAIL	154.00	145.00	154	145	299	7.3
	Zone 20 Subtotal					154	145	299	7.3
21	Sierra Gatew	195.00	du's	0.40	0.22	78	43	121	3.0
	Zone 21 Subtotal					78	43	121	3.0
22	QUARRY ROW	64.00	SFR	0.64	0.36	41	23	64	1.6
	Zone 22 Subtotal					41	23	64	1.6
23	Rocklin Gate	204.00	MFR	0.40	0.22	82	45	127	3.1
	Zone 23 Subtotal					82	45	127	3.1
24	mont serate	54.00	SFR	0.63	0.37	34	20	54	1.3
	Zone 24 Subtotal					34	20	54	1.3
25	Poppy ridge	6.00	SFR	0.63	0.37	4	2	6	0.1
	Zone 25 Subtotal					4	2	6	0.1
26	flying gate	1.00	stable	7.00	9.00	7	9	16	0.4
	Zone 26 Subtotal					7	9	16	0.4
27	Del Oro,	12.00	SFR	0.63	0.37	8	4	12	0.3
	Zone 27 Subtotal					8	4	12	0.3
28	Taylor Road	1.00	SFR	29.00	17.00	29	17	46	1.1
28	Taylor Road	1.00	retail	34.00	37.00	34	37	71	1.7
	Zone 28 Subtotal					63	54	117	2.9
29	heritage par	40.00	SFR	0.63	0.37	25	15	40	1.0
	Zone 29 Subtotal					25	15	40	1.0
30	Village at L	1.00	Mixed	311.00	248.00	311	248	559	13.7
	Zone 30 Subtotal					311	248	559	13.7
31	Loomis Cross	1.00	commercial	30.00	33.00	30	33	63	1.5
	Zone 31 Subtotal					30	33	63	1.5
32	vacant Monte	5.00	SFR	0.63	0.37	3	2	5	0.1
	Zone 32 Subtotal					3	2	5	0.1
TOTAL						2362	1721	4083	100.0

EPAP PLUS PROJECT
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Trip Distribution Report

Percent Of Trips CURRENT

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	11.0	4.0	24.0	11.0	10.0	8.0	0.0	14.0	6.0	0.0	0.0
2	10.0	0.0	20.0	0.0	0.0	0.0	55.0	0.0	0.0	10.0	5.0
6	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
27	1.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	36.0	7.0	10.0	0.0	9.0	9.0	0.0	0.0	7.0	0.0
10	0.0	2.0	18.0	14.0	2.0	0.0	3.0	7.0	35.0	7.0	7.0
11	0.0	2.0	22.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
12	0.0	4.0	20.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
14	0.0	10.0	14.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
15	0.0	0.0	73.0	10.0	0.0	0.0	0.0	0.0	10.0	7.0	0.0
16	0.0	2.0	13.0	24.0	0.0	0.0	7.0	7.0	33.0	7.0	3.0
17	0.0	2.0	11.0	21.0	0.0	0.0	10.0	10.0	25.0	15.0	2.0
18	0.0	65.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0

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Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
19	0.0	36.0	7.0	10.0	0.0	9.0	5.0	4.0	0.0	7.0	0.0
20	0.0	0.0	15.0	15.0	0.0	0.0	10.0	10.0	25.0	15.0	5.0
21	0.0	0.0	8.0	15.0	2.0	0.0	6.0	7.0	0.0	7.0	40.0
22	70.0	0.0	0.0	2.0	0.0	10.0	5.0	5.0	0.0	7.0	0.0
23	0.0	0.0	0.0	10.0	0.0	0.0	5.0	5.0	0.0	5.0	0.0
24	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
25	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
26	0.0	0.0	25.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	6.0	7.0	10.0	0.0	9.0	9.0	0.0	30.0	7.0	0.0
28	0.0	0.0	0.0	10.0	0.0	57.5	5.0	5.0	15.0	0.0	2.5
29	0.0	0.0	0.0	10.0	0.0	50.0	5.0	5.0	30.0	0.0	0.0
30	0.0	0.0	0.0	10.0	0.0	60.0	5.0	5.0	12.5	0.0	2.5
31	0.0	0.0	10.0	10.0	0.0	22.5	5.0	5.0	15.0	5.0	2.5
32	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0	0.0	10.0	45.0

Zone	To Gates	
	23	26
1	0.0	0.0
2	0.0	0.0
6	0.0	0.0
7	0.0	0.0
9	0.0	0.0
10	5.0	0.0
11	2.0	0.0
12	2.0	0.0
14	2.0	0.0
15	0.0	0.0
16	2.0	0.0
17	2.0	0.0
18	0.0	0.0
19	0.0	0.0
20	5.0	0.0
21	15.0	0.0
22	1.0	0.0
23	0.0	0.0
24	20.0	0.0
25	20.0	0.0
26	35.0	0.0
27	5.0	0.0
28	5.0	0.0
29	0.0	0.0
30	5.0	0.0
31	5.0	0.0
32	10.0	5.0

EPAP PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Turning Movement Report
PM PEAK

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#6 Rocklin Rd / Sierra College Blvd													
Base	290	864	65	144	709	143	200	287	364	42	184	127	3419
Added	0	209	11	67	174	32	40	43	0	13	24	56	669
Total	290	1073	76	211	883	175	240	330	364	55	208	183	4088
#515 ROCKLIN ROAD / BARTON ROAD													
Base	267	60	0	0	56	53	57	0	368	0	0	0	861
Added	47	22	0	0	16	16	27	0	37	0	0	0	165
Total	314	82	0	0	72	69	84	0	405	0	0	0	1026
#617 rocklin road / james lane													
Base	13	0	3	0	0	3	2	416	14	1	349	1	802
Added	2	0	0	3	0	6	5	63	3	0	60	2	144
Total	15	0	3	3	0	9	7	479	17	1	409	3	946

EXISTING PLUS APPROVED PROJECTS
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.840
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 142 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	1	1	0	3	0	1	1	0	2	0	1

Volume Module:

Base Vol:	290	864	65	144	709	143	200	287	364	42	184	127
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	290	864	65	144	709	143	200	287	364	42	184	127
Added Vol:	0	209	9	66	174	32	40	42	0	10	24	53
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	290	1073	74	210	883	175	240	329	364	52	208	180
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	290	1073	74	210	883	175	240	329	364	52	208	180
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	1073	74	210	883	175	240	329	364	52	208	180
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	1073	74	210	883	175	240	329	364	52	208	180

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.87	0.13	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.07	0.93
Final Sat.:	2900	2713	187	1450	4350	1450	1450	2900	1450	1450	1555	1345

Capacity Analysis Module:

Vol/Sat:	0.11	0.40	0.40	0.14	0.20	0.12	0.17	0.11	0.25	0.04	0.13	0.13
Crit Volume:	574			210			240			194		
Crit Moves:	****			****			****			****		

EPAP PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.842
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 144 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	1	1	0	0	1	0	2	0	1	0

Volume Module:

Base Vol:	290	864	65	144	709	143	200	287	364	42	184	127
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	290	864	65	144	709	143	200	287	364	42	184	127
Added Vol:	0	209	11	67	174	32	40	43	0	13	24	56
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	290	1073	76	211	883	175	240	330	364	55	208	183
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	290	1073	76	211	883	175	240	330	364	55	208	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	1073	76	211	883	175	240	330	364	55	208	183
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	1073	76	211	883	175	240	330	364	55	208	183

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.87	0.13	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.06	0.94
Final Sat.:	2900	2708	192	1450	4350	1450	1450	2900	1450	1450	1543	1357

Capacity Analysis Module:

Vol/Sat:	0.11	0.40	0.40	0.15	0.20	0.12	0.17	0.11	0.25	0.04	0.13	0.13
Crit Volume:	575			211			240			196		
Crit Moves:	****			****			****			****		

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Scenario Report

Scenario: CUM AM DOMING AND SHRIBER

Command: Default Command
Volume: FLYING GATE CUM AM
Geometry: 2030
Impact Fee: Default Impact Fee
Trip Generation: AM SECRET RAVINE
Trip Distribution: CURRENT
Paths: NO CLOVER
Routes: Default Route
Configuration: Default Configuration

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Trip Generation Report

Forecast for AM SECRET RAVINE

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
26	flying gate	1.00	stable	5.00	1.00	5	1	6	100.0
	Zone 26 Subtotal					5	1	6	100.0
TOTAL						5	1	6	100.0

CUMULATIVE PLUS PROJECT
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Trip Distribution Report

Percent Of Trips CURRENT

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	11.0	4.0	24.0	11.0	10.0	8.0	0.0	14.0	6.0	0.0	0.0
2	10.0	0.0	20.0	0.0	0.0	0.0	55.0	0.0	0.0	10.0	5.0
6	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
27	1.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	36.0	7.0	10.0	0.0	9.0	9.0	0.0	0.0	7.0	0.0
10	0.0	2.0	18.0	14.0	2.0	0.0	3.0	7.0	35.0	7.0	7.0
11	0.0	2.0	22.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
12	0.0	4.0	20.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
14	0.0	10.0	14.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
15	0.0	0.0	73.0	10.0	0.0	0.0	0.0	0.0	10.0	7.0	0.0
18	0.0	65.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0
19	0.0	36.0	7.0	10.0	0.0	9.0	5.0	4.0	0.0	7.0	0.0
20	0.0	0.0	15.0	15.0	0.0	0.0	10.0	10.0	25.0	15.0	5.0
21	0.0	0.0	8.0	15.0	2.0	0.0	6.0	7.0	0.0	7.0	40.0
22	70.0	0.0	0.0	2.0	0.0	10.0	5.0	5.0	0.0	7.0	0.0

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
23	0.0	0.0	0.0	10.0	0.0	0.0	5.0	5.0	0.0	5.0	0.0
24	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
25	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
26	0.0	0.0	25.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	6.0	7.0	10.0	0.0	9.0	9.0	0.0	30.0	7.0	0.0
28	0.0	0.0	0.0	10.0	0.0	57.5	5.0	5.0	15.0	0.0	2.5
29	0.0	0.0	0.0	10.0	0.0	50.0	5.0	5.0	30.0	0.0	0.0
30	0.0	0.0	0.0	10.0	0.0	60.0	5.0	5.0	12.5	0.0	2.5
31	0.0	0.0	10.0	10.0	0.0	22.5	5.0	5.0	15.0	5.0	2.5
32	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0	0.0	10.0	45.0

Zone	To Gates	
	23	26
1	0.0	0.0
2	0.0	0.0
6	0.0	0.0
7	0.0	0.0
9	0.0	0.0
10	5.0	0.0
11	2.0	0.0
12	2.0	0.0
14	2.0	0.0
15	0.0	0.0
18	0.0	0.0
19	0.0	0.0
20	5.0	0.0
21	15.0	0.0
22	1.0	0.0
23	0.0	0.0
24	20.0	0.0
25	20.0	0.0
26	35.0	0.0
27	5.0	0.0
28	5.0	0.0
29	0.0	0.0
30	5.0	0.0
31	5.0	0.0
32	10.0	5.0

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Turning Movement Report
AM SECRET RAVINE

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#6 Rocklin Rd / Sierra College Blvd													
Base	410	1105	120	175	1385	215	150	210	255	165	330	345	4865
Added	0	0	2	1	0	0	0	1	0	0	0	0	4
Total	410	1105	122	176	1385	215	150	211	255	165	330	345	4869
#515 ROCKLIN ROAD / BARTON ROAD													
Base	660	65	0	0	95	155	125	0	355	0	0	0	1455
Added	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	662	65	0	0	95	155	125	0	355	0	0	0	1457
#617 rocklin road / james lane													
Base	13	0	3	0	0	0	0	480	11	6	815	0	1328
Added	0	0	0	0	0	1	3	0	0	0	0	2	6
Total	13	0	3	0	0	1	3	480	11	6	815	2	1334

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

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*****
Intersection #6 Rocklin Rd / Sierra College Blvd
*****
Cycle (sec):      100          Critical Vol./Cap.(X):      0.884
Loss Time (sec):   0          Average Delay (sec/veh):      xxxxxx
Optimal Cycle:     180          Level Of Service:          D
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Protected      Protected      Protected      Protected
Rights:      Include      Include      Include      Include
Min. Green:    0 0 0      0 0 0      0 0 0      0 0 0
Y+R:          4.0 4.0 4.0    4.0 4.0 4.0    4.0 4.0 4.0    4.0 4.0 4.0
Lanes:        2 0 1 1 0      1 0 3 0 1      1 0 2 0 1      1 0 1 1 0
-----|-----|-----|-----|
Volume Module:
Base Vol:      410 1105 120 175 1385 215 150 210 255 165 330 345
Growth Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    410 1105 120 175 1385 215 150 210 255 165 330 345
User Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    410 1105 120 175 1385 215 150 210 255 165 330 345
Reduct Vol:    0 0 0      0 0 0      0 0 0      0 0 0
Reduced Vol:   410 1105 120 175 1385 215 150 210 255 165 330 345
PCE Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:       1.10 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:   451 1105 120 175 1385 215 150 210 255 165 330 345
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:      1450 1450 1450 1450 1450 1450 1450 1450 1450 1450 1450
Adjustment:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:        2.00 1.80 0.20 1.00 3.00 1.00 1.00 2.00 1.00 1.00 1.00
Final Sat.:    2900 2616 284 1450 4350 1450 1450 2900 1450 1450 1450
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:       0.16 0.42 0.42 0.12 0.32 0.15 0.10 0.07 0.18 0.11 0.23 0.24
Crit Volume:    613 175          150          345
Crit Moves:     ****  ****          ****          ****
*****

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CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.886
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	1	1	0	3	0	1	1	0	2	0	1

Volume Module:

Base Vol:	410	1105	120	175	1385	215	150	210	255	165	330	345
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	410	1105	120	175	1385	215	150	210	255	165	330	345
Added Vol:	0	0	2	1	0	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	410	1105	122	176	1385	215	150	211	255	165	330	345
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	410	1105	122	176	1385	215	150	211	255	165	330	345
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	410	1105	122	176	1385	215	150	211	255	165	330	345
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	451	1105	122	176	1385	215	150	211	255	165	330	345

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.80	0.20	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00
Final Sat.:	2900	2612	288	1450	4350	1450	1450	2900	1450	1450	1450	1450

Capacity Analysis Module:

Vol/Sat:	0.16	0.42	0.42	0.12	0.32	0.15	0.10	0.07	0.18	0.11	0.23	0.24
Crit Volume:	614			176			150					345
Crit Moves:	****			****			****					****

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.769
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 99 Level Of Service: C

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Ovl					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0	1	2	0	3	0	1	2	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	410	1105	120	175	1385	215	150	210	255	165	330	345
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	410	1105	120	175	1385	215	150	210	255	165	330	345
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	410	1105	120	175	1385	215	150	210	255	165	330	345
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	410	1105	120	175	1385	215	150	210	255	165	330	345
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
Final Volume:	451	1105	120	193	1385	215	165	210	255	165	330	345

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2900	4350	1450	2900	4350	1450	2900	2900	1450	1450	2900	1450

Capacity Analysis Module:

Vol/Sat:	0.16	0.25	0.08	0.07	0.32	0.15	0.06	0.07	0.18	0.11	0.11	0.24
Crit Volume:	226			462			83					345
Crit Moves:	****			****			****					****

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

MITIGATED

Cycle (sec): 100 Critical Vol./Cap.(X): 0.769

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 99 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Ovl			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	3	0	1	2	0	3	0	1	2	0	3

Volume Module:

Base Vol:	410	1105	120	175	1385	215	150	210	255	165	330	345
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	410	1105	120	175	1385	215	150	210	255	165	330	345
Added Vol:	0	0	2	1	0	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	410	1105	122	176	1385	215	150	211	255	165	330	345
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	410	1105	122	176	1385	215	150	211	255	165	330	345
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	410	1105	122	176	1385	215	150	211	255	165	330	345
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
FinalVolume:	451	1105	122	194	1385	215	165	211	255	165	330	345

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2900	4350	1450	2900	4350	1450	2900	2900	1450	1450	2900	1450

Capacity Analysis Module:

Vol/Sat:	0.16	0.25	0.08	0.07	0.32	0.15	0.06	0.07	0.18	0.11	0.11	0.24
Crit Volume:	226				462		83					345
Crit Moves:	****				****		****					****

CUMULATIVE PLUS PROJECT
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Scenario Report

Scenario: CUM PM DOMG AND SHRIBER SIGNAL

Command: Default Command
Volume: FLYING GATE CUM PM
Geometry: 2030
Impact Fee: Default Impact Fee
Trip Generation: PM SECRET RAVONE
Trip Distribution: CURRENT
Paths: NO CLOVER
Routes: Default Route
Configuration: Default Configuration

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Trip Generation Report

Forecast for PM SECRET RAVINE

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total % Of Trips Total
26	flying gate	1.00	stable	7.00	9.00	7	9	16 100.0
	Zone 26 Subtotal					7	9	16 100.0
TOTAL						7	9	16 100.0

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Trip Distribution Report

Percent Of Trips CURRENT

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	11.0	4.0	24.0	11.0	10.0	8.0	0.0	14.0	6.0	0.0	0.0
2	10.0	0.0	20.0	0.0	0.0	0.0	55.0	0.0	0.0	10.0	5.0
6	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
27	1.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	25.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	36.0	7.0	10.0	0.0	9.0	9.0	0.0	0.0	7.0	0.0
10	0.0	2.0	18.0	14.0	2.0	0.0	3.0	7.0	35.0	7.0	7.0
11	0.0	2.0	22.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
12	0.0	4.0	20.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
14	0.0	10.0	14.0	15.0	0.0	0.0	0.0	7.0	40.0	10.0	2.0
15	0.0	0.0	73.0	10.0	0.0	0.0	0.0	0.0	10.0	7.0	0.0
18	0.0	65.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0
19	0.0	36.0	7.0	10.0	0.0	9.0	5.0	4.0	0.0	7.0	0.0
20	0.0	0.0	15.0	15.0	0.0	0.0	10.0	10.0	25.0	15.0	5.0
21	0.0	0.0	8.0	15.0	2.0	0.0	6.0	7.0	0.0	7.0	40.0
22	70.0	0.0	0.0	2.0	0.0	10.0	5.0	5.0	0.0	7.0	0.0

CUMULATIVE PLUS PROJECT
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Zone	To Gates										
	12	13	14	15	16	17	18	19	20	21	22
23	0.0	0.0	0.0	10.0	0.0	0.0	5.0	5.0	0.0	5.0	0.0
24	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
25	0.0	0.0	5.0	15.0	0.0	10.0	10.0	5.0	0.0	10.0	0.0
26	0.0	0.0	25.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	6.0	7.0	10.0	0.0	9.0	9.0	0.0	30.0	7.0	0.0
28	0.0	0.0	0.0	10.0	0.0	57.5	5.0	5.0	15.0	0.0	2.5
29	0.0	0.0	0.0	10.0	0.0	50.0	5.0	5.0	30.0	0.0	0.0
30	0.0	0.0	0.0	10.0	0.0	60.0	5.0	5.0	12.5	0.0	2.5
31	0.0	0.0	10.0	10.0	0.0	22.5	5.0	5.0	15.0	5.0	2.5
32	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0	0.0	10.0	45.0

Zone	To Gates	
	23	26
1	0.0	0.0
2	0.0	0.0
6	0.0	0.0
7	0.0	0.0
9	0.0	0.0
10	5.0	0.0
11	2.0	0.0
12	2.0	0.0
14	2.0	0.0
15	0.0	0.0
18	0.0	0.0
19	0.0	0.0
20	5.0	0.0
21	15.0	0.0
22	1.0	0.0
23	0.0	0.0
24	20.0	0.0
25	20.0	0.0
26	35.0	0.0
27	5.0	0.0
28	5.0	0.0
29	0.0	0.0
30	5.0	0.0
31	5.0	0.0
32	10.0	5.0

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Turning Movement Report
PM SECRET RAVINE

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#6 Rocklin Rd / Sierra College Blvd													
Base	570	1845	230	350	1590	195	185	435	510	90	235	175	6410
Added	0	0	2	2	0	0	0	1	0	3	1	2	11
Total	570	1845	232	352	1590	195	185	436	510	93	236	177	6421
#515 ROCKLIN ROAD / BARTON ROAD													
Base	355	95	0	0	70	110	225	0	730	0	0	0	1585
Added	2	0	0	0	0	0	0	0	3	0	0	0	5
Total	357	95	0	0	70	110	225	0	733	0	0	0	1590
#617 rocklin road / james lane													
Base	15	0	3	0	0	3	2	955	17	1	0	0	996
Added	0	0	0	3	0	6	5	0	0	0	0	2	16
Total	15	0	3	3	0	9	7	955	17	1	0	2	1012

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.371

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	1	1	0	3	0	1	1	0	2	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	570	1845	230	350	1590	195	185	435	510	90	235	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	570	1845	230	350	1590	195	185	435	510	90	235	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	570	1845	230	350	1590	195	185	435	510	90	235	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	570	1845	230	350	1590	195	185	435	510	90	235	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	627	1845	230	350	1590	195	185	435	510	90	235	175

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.78	0.22	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.15	0.85
Final Sat.:	2900	2579	321	1450	4350	1450	1450	2900	1450	1450	1662	1238

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.22	0.72	0.72	0.24	0.37	0.13	0.13	0.15	0.35	0.06	0.14	0.14
Crit Volume:	1038			350			510			90		
Crit Moves:	****			****			****			****		

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.375

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	1	1	0	1	0	3	0	1	1	0	2	0	1	1	0	1	1	0

Volume Module:

Base Vol:	570	1845	230	350	1590	195	185	435	510	90	235	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	570	1845	230	350	1590	195	185	435	510	90	235	175
Added Vol:	0	0	2	2	0	0	0	1	0	3	1	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	570	1845	232	352	1590	195	185	436	510	93	236	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	570	1845	232	352	1590	195	185	436	510	93	236	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	570	1845	232	352	1590	195	185	436	510	93	236	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	627	1845	232	352	1590	195	185	436	510	93	236	177

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.78	0.22	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.14	0.86
Final Sat.:	2900	2576	324	1450	4350	1450	1450	2900	1450	1450	1657	1243

Capacity Analysis Module:

Vol/Sat:	0.22	0.72	0.72	0.24	0.37	0.13	0.13	0.15	0.35	0.06	0.14	0.14
Crit Volume:	1039			352			510			93		
Crit Moves:	****			****			****			****		

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.794

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 111 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Ovl			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	2	0	3	0	1	2	0	3	0	1	2	0	3

Volume Module:

Base Vol:	570	1845	230	350	1590	195	185	435	510	90	235	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	570	1845	230	350	1590	195	185	435	510	90	235	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	570	1845	230	350	1590	195	185	435	510	90	235	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	570	1845	230	350	1590	195	185	435	510	90	235	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
FinalVolume:	627	1845	230	385	1590	195	204	435	510	90	235	175

Saturation Flow Module:

Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2900	4350	1450	2900	4350	1450	2900	2900	1450	1450	2900	1450

Capacity Analysis Module:

Vol/Sat:	0.22	0.42	0.16	0.13	0.37	0.13	0.07	0.15	0.35	0.06	0.08	0.12
Crit Volume:	314			530			217			90		
Crit Moves:	****			****			****			****		

CUMULATIVE PLUS PROJECT
flying gate stables 0095-01 AEROMETALS

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #6 Rocklin Rd / Sierra College Blvd

MITIGATED

Cycle (sec): 100 Critical Vol./Cap.(X): 0.796

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx









Optimal Cycle: 112 Level Of Service: C

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Ovl					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0	1	2	0	3	0	1	2	0	2	0	1	1	0	2	0	1

Volume Module:												
Base Vol:	570	1845	230	350	1590	195	185	435	510	90	235	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	570	1845	230	350	1590	195	185	435	510	90	235	175
Added Vol:	0	0	2	2	0	0	0	1	0	3	1	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	570	1845	232	352	1590	195	185	436	510	93	236	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	570	1845	232	352	1590	195	185	436	510	93	236	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	570	1845	232	352	1590	195	185	436	510	93	236	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00
FinalVolume:	627	1845	232	387	1590	195	204	436	510	93	236	177

Saturation Flow Module:												
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2900	4350	1450	2900	4350	1450	2900	2900	1450	1450	2900	1450

Capacity Analysis Module:												
Vol/Sat:	0.22	0.42	0.16	0.13	0.37	0.13	0.07	0.15	0.35	0.06	0.08	0.12
Crit Volume:	314			530			218			93		
Crit Moves:	****			****			****			****		

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	335	10	6	480	0	10	0	3	0	0	0
Future Vol, veh/h	0	335	10	6	480	0	10	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	360	11	6	516	0	11	0	3	0	0	0





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	516	0	0	371	0	0	888	-	360	895	899	516
Stage 1	-	-	-	-	-	-	360	-	-	528	528	-
Stage 2	-	-	-	-	-	-	528	-	-	367	371	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1050	-	-	1188	-	-	264	0	684	261	279	559
Stage 1	-	-	-	-	-	-	658	0	-	534	528	-
Stage 2	-	-	-	-	-	-	534	0	-	653	620	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1050	-	-	1188	-	-	263	-	684	259	278	559
Mov Cap-2 Maneuver	-	-	-	-	-	-	263	-	-	259	278	-
Stage 1	-	-	-	-	-	-	658	-	-	534	525	-
Stage 2	-	-	-	-	-	-	531	-	-	650	620	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	17.2	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	263	684	1050	-	-	1188	-	-	-
HCM Lane V/C Ratio	0.041	0.005	-	-	-	0.005	-	-	-
HCM Control Delay (s)	19.3	10.3	0	-	-	8	-	-	0
HCM Lane LOS	C	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	-










Intersection

Intersection Delay, s/veh	18.2
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	96	225	386	49	57	86
Future Vol, veh/h	96	225	386	49	57	86
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	250	429	54	63	96
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	14.4	23.7	10.3
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	30%	0%
Vol Thru, %	0%	100%	0%	40%
Vol Right, %	0%	0%	70%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	386	49	321	143
LT Vol	386	0	96	0
Through Vol	0	49	0	57
RT Vol	0	0	225	86
Lane Flow Rate	429	54	357	159
Geometry Grp	7	7	2	5
Degree of Util (X)	0.749	0.087	0.531	0.242
Departure Headway (Hd)	6.287	5.78	5.361	5.493
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	575	620	671	653
Service Time	4.018	3.512	3.404	3.538
HCM Lane V/C Ratio	0.746	0.087	0.532	0.243
HCM Control Delay	25.5	9.1	14.4	10.3
HCM Lane LOS	D	A	B	B
HCM 95th-tile Q	6.6	0.3	3.1	0.9





Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	416	14	1	349	1	13	0	3	0	0	3
Future Vol, veh/h	2	416	14	1	349	1	13	0	3	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	447	15	1	375	1	14	0	3	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	376	0	0	462	0	0	830	-	447	838	844	376
Stage 1	-	-	-	-	-	-	451	-	-	378	378	-
Stage 2	-	-	-	-	-	-	379	-	-	460	466	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1182	-	-	1099	-	-	289	0	612	286	300	670
Stage 1	-	-	-	-	-	-	588	0	-	644	615	-
Stage 2	-	-	-	-	-	-	643	0	-	581	562	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1182	-	-	1099	-	-	287	-	612	284	299	670
Mov Cap-2 Maneuver	-	-	-	-	-	-	287	-	-	284	299	-
Stage 1	-	-	-	-	-	-	587	-	-	643	614	-
Stage 2	-	-	-	-	-	-	639	-	-	577	561	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			16.8			10.4		
HCM LOS							C			B		









Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	287	612	1182	-	-	1099	-	-	670
HCM Lane V/C Ratio	0.049	0.005	0.002	-	-	0.001	-	-	0.005
HCM Control Delay (s)	18.2	10.9	8.1	-	-	8.3	-	-	10.4
HCM Lane LOS	C	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	368	267	60	56	53
Future Vol, veh/h	57	368	267	60	56	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	409	297	67	62	59
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	16	15	10
HCM LOS	C	B	A

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	13%	0%
Vol Thru, %	0%	100%	0%	51%
Vol Right, %	0%	0%	87%	49%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	267	60	425	109
LT Vol	267	0	57	0
Through Vol	0	60	0	56
RT Vol	0	0	368	53
Lane Flow Rate	297	67	472	121
Geometry Grp	7	7	2	5
Degree of Util (X)	0.532	0.11	0.637	0.188
Departure Headway (Hd)	6.456	5.949	4.855	5.6
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	558	603	751	639
Service Time	4.194	3.686	2.855	3.648
HCM Lane V/C Ratio	0.532	0.111	0.628	0.189
HCM Control Delay	16.3	9.4	16	10
HCM Lane LOS	C	A	C	A
HCM 95th-tile Q	3.1	0.4	4.6	0.7





Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	335	10	6	480	2	10	0	3	0	0	1
Future Vol, veh/h	4	335	10	6	480	2	10	0	3	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	360	11	6	516	2	11	0	3	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	518	0	0	371	0	0	898	-	360	904	908	517
Stage 1	-	-	-	-	-	-	368	-	-	529	529	-
Stage 2	-	-	-	-	-	-	530	-	-	375	379	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1048	-	-	1188	-	-	260	0	684	258	275	558
Stage 1	-	-	-	-	-	-	652	0	-	533	527	-
Stage 2	-	-	-	-	-	-	533	0	-	646	615	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1048	-	-	1188	-	-	258	-	684	255	273	558
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	-	-	255	273	-
Stage 1	-	-	-	-	-	-	649	-	-	531	524	-
Stage 2	-	-	-	-	-	-	529	-	-	640	613	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			17.5			11.5		
HCM LOS							C			B		









Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	258	684	1048	-	-	1188	-	-	558
HCM Lane V/C Ratio	0.042	0.005	0.004	-	-	0.005	-	-	0.002
HCM Control Delay (s)	19.6	10.3	8.4	-	-	8	-	-	11.5
HCM Lane LOS	C	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	96	225	388	49	57	86
Future Vol, veh/h	96	225	388	49	57	86
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	250	431	54	63	96
Number of Lanes	1	0	1	1	1	0





Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	14.4	23.9	10.3
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	30%	0%
Vol Thru, %	0%	100%	0%	40%
Vol Right, %	0%	0%	70%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	388	49	321	143
LT Vol	388	0	96	0
Through Vol	0	49	0	57
RT Vol	0	0	225	86
Lane Flow Rate	431	54	357	159
Geometry Grp	7	7	2	5
Degree of Util (X)	0.753	0.087	0.532	0.243
Departure Headway (Hd)	6.289	5.783	5.366	5.499
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	578	620	671	651
Service Time	4.021	3.515	3.412	3.544
HCM Lane V/C Ratio	0.746	0.087	0.532	0.244
HCM Control Delay	25.8	9.1	14.4	10.3
HCM Lane LOS	D	A	B	B
HCM 95th-tile Q	6.6	0.3	3.2	0.9

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	416	14	1	349	3	13	0	3	3	0	9
Future Vol, veh/h	7	416	14	1	349	3	13	0	3	3	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	447	15	1	375	3	14	0	3	3	0	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	378	0	0	462	0	0	847	-	447	851	857	377
Stage 1	-	-	-	-	-	-	463	-	-	379	379	-
Stage 2	-	-	-	-	-	-	384	-	-	472	478	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1180	-	-	1099	-	-	282	0	612	280	295	670
Stage 1	-	-	-	-	-	-	579	0	-	643	615	-
Stage 2	-	-	-	-	-	-	639	0	-	573	556	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1180	-	-	1099	-	-	276	-	612	277	293	670
Mov Cap-2 Maneuver	-	-	-	-	-	-	276	-	-	277	293	-
Stage 1	-	-	-	-	-	-	575	-	-	638	614	-
Stage 2	-	-	-	-	-	-	629	-	-	566	552	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			17.2			12.5		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	276	612	1180	-	-	1099	-	-	495			
HCM Lane V/C Ratio	0.051	0.005	0.006	-	-	0.001	-	-	0.026			
HCM Control Delay (s)	18.7	10.9	8.1	-	-	8.3	-	-	12.5			
HCM Lane LOS	C	B	A	-	-	A	-	-	B			
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0	-	-	0.1			









Intersection

Intersection Delay, s/veh	15
Intersection LOS	B






Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	371	269	60	56	53
Future Vol, veh/h	57	371	269	60	56	53
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	412	299	67	62	59
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	16.2	15.2	10
HCM LOS	C	C	A

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	13%	0%
Vol Thru, %	0%	100%	0%	51%
Vol Right, %	0%	0%	87%	49%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	269	60	428	109
LT Vol	269	0	57	0
Through Vol	0	60	0	56
RT Vol	0	0	371	53
Lane Flow Rate	299	67	476	121
Geometry Grp	7	7	2	5
Degree of Util (X)	0.537	0.11	0.643	0.189
Departure Headway (Hd)	6.469	5.962	4.864	5.618
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	559	601	747	637
Service Time	4.207	3.7	2.864	3.667
HCM Lane V/C Ratio	0.535	0.111	0.637	0.19
HCM Control Delay	16.5	9.4	16.2	10
HCM Lane LOS	C	A	C	A
HCM 95th-tile Q	3.2	0.4	4.7	0.7









Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	376	11	6	525	0	13	0	3	0	0	0
Future Vol, veh/h	0	376	11	6	525	0	13	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	404	12	6	565	0	14	0	3	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	565	0	0	416	0	0	981	-	404	989	993	565
Stage 1	-	-	-	-	-	-	404	-	-	577	577	-
Stage 2	-	-	-	-	-	-	577	-	-	412	416	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1007	-	-	1143	-	-	229	0	647	226	245	524
Stage 1	-	-	-	-	-	-	623	0	-	502	502	-
Stage 2	-	-	-	-	-	-	502	0	-	617	592	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1007	-	-	1143	-	-	228	-	647	224	244	524
Mov Cap-2 Maneuver	-	-	-	-	-	-	228	-	-	224	244	-
Stage 1	-	-	-	-	-	-	623	-	-	502	499	-
Stage 2	-	-	-	-	-	-	499	-	-	614	592	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			19.7			0		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	228	647	1007	-	-	1143	-	-	-			
HCM Lane V/C Ratio	0.061	0.005	-	-	-	0.006	-	-	-			
HCM Control Delay (s)	21.8	10.6	0	-	-	8.2	-	-	0			
HCM Lane LOS	C	B	A	-	-	A	-	-	A			
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0	-	-	-			

Intersection	
Intersection Delay, s/veh	22
Intersection LOS	C






Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	104	258	405	58	75	110
Future Vol, veh/h	104	258	405	58	75	110
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	287	450	64	83	122
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	17.5	29.7	11.7
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	29%	0%
Vol Thru, %	0%	100%	0%	41%
Vol Right, %	0%	0%	71%	59%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	405	58	362	185
LT Vol	405	0	104	0
Through Vol	0	58	0	75
RT Vol	0	0	258	110
Lane Flow Rate	450	64	402	206
Geometry Grp	7	7	2	5
Degree of Util (X)	0.819	0.108	0.623	0.329
Departure Headway (Hd)	6.553	6.045	5.573	5.763
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	554	592	644	621
Service Time	4.305	3.797	3.636	3.83
HCM Lane V/C Ratio	0.812	0.108	0.624	0.332
HCM Control Delay	32.6	9.5	17.5	11.7
HCM Lane LOS	D	A	C	B
HCM 95th-tile Q	8.2	0.4	4.3	1.4









Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	479	17	1	409	1	15	0	3	0	0	3
Future Vol, veh/h	2	479	17	1	409	1	15	0	3	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	515	18	1	440	1	16	0	3	0	0	3
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	441	0	0	533	0	0	963	-	515	973	980	441
Stage 1	-	-	-	-	-	-	519	-	-	443	443	-
Stage 2	-	-	-	-	-	-	444	-	-	530	537	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1119	-	-	1035	-	-	235	0	560	231	250	616
Stage 1	-	-	-	-	-	-	540	0	-	594	576	-
Stage 2	-	-	-	-	-	-	593	0	-	533	523	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1119	-	-	1035	-	-	233	-	560	229	249	616
Mov Cap-2 Maneuver	-	-	-	-	-	-	233	-	-	229	249	-
Stage 1	-	-	-	-	-	-	539	-	-	593	575	-
Stage 2	-	-	-	-	-	-	589	-	-	529	522	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			19.9			10.9		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	233	560	1119	-	-	1035	-	-	616			
HCM Lane V/C Ratio	0.069	0.006	0.002	-	-	0.001	-	-	0.005			
HCM Control Delay (s)	21.6	11.5	8.2	-	-	8.5	-	-	10.9			
HCM Lane LOS	C	B	A	-	-	A	-	-	B			
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0	-	-	0			

Intersection	
Intersection Delay, s/veh	20.4
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	84	402	311	82	72	69
Future Vol, veh/h	84	402	311	82	72	69
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	447	346	91	80	77
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	23.9	19.3	11.3
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	17%	0%
Vol Thru, %	0%	100%	0%	51%
Vol Right, %	0%	0%	83%	49%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	311	82	486	141
LT Vol	311	0	84	0
Through Vol	0	82	0	72
RT Vol	0	0	402	69
Lane Flow Rate	346	91	540	157
Geometry Grp	7	7	2	5
Degree of Util (X)	0.655	0.16	0.776	0.263
Departure Headway (Hd)	6.819	6.31	5.17	6.037
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	529	567	697	592
Service Time	4.573	4.064	3.225	4.106
HCM Lane V/C Ratio	0.654	0.16	0.775	0.265
HCM Control Delay	21.7	10.3	23.9	11.3
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	4.7	0.6	7.5	1.1

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	376	11	6	525	2	13	0	3	0	0	1
Future Vol, veh/h	3	376	11	6	525	2	13	0	3	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	404	12	6	565	2	14	0	3	0	0	1





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	567	0	0	416	0	0	989	-	404	996	1000	566
Stage 1	-	-	-	-	-	-	410	-	-	578	578	-
Stage 2	-	-	-	-	-	-	579	-	-	418	422	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1005	-	-	1143	-	-	226	0	647	223	243	524
Stage 1	-	-	-	-	-	-	619	0	-	501	501	-
Stage 2	-	-	-	-	-	-	501	0	-	612	588	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1005	-	-	1143	-	-	224	-	647	221	241	524
Mov Cap-2 Maneuver	-	-	-	-	-	-	224	-	-	221	241	-
Stage 1	-	-	-	-	-	-	617	-	-	499	498	-
Stage 2	-	-	-	-	-	-	497	-	-	607	586	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			19.9			11.9		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	224	647	1005	-	-	1143	-	-	524
HCM Lane V/C Ratio	0.062	0.005	0.003	-	-	0.006	-	-	0.002
HCM Control Delay (s)	22.1	10.6	8.6	-	-	8.2	-	-	11.9
HCM Lane LOS	C	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0	-	-	0









Intersection

Intersection Delay, s/veh	22.3
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	104	259	407	58	75	110
Future Vol, veh/h	104	259	407	58	75	110
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	288	452	64	83	122
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	17.6	30.2	11.7
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	29%	0%
Vol Thru, %	0%	100%	0%	41%
Vol Right, %	0%	0%	71%	59%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	407	58	363	185
LT Vol	407	0	104	0
Through Vol	0	58	0	75
RT Vol	0	0	259	110
Lane Flow Rate	452	64	403	206
Geometry Grp	7	7	2	5
Degree of Util (X)	0.824	0.108	0.625	0.33
Departure Headway (Hd)	6.561	6.053	5.58	5.774
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	552	591	645	619
Service Time	4.31	3.802	3.644	3.839
HCM Lane V/C Ratio	0.819	0.108	0.625	0.333
HCM Control Delay	33.1	9.5	17.6	11.7
HCM Lane LOS	D	A	C	B
HCM 95th-tile Q	8.3	0.4	4.4	1.4

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	479	17	1	409	3	15	0	3	3	0	9
Future Vol, veh/h	2	479	17	1	409	3	15	0	3	3	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	515	18	1	440	3	16	0	3	3	0	10






Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	443	0	0	533	0	0	968	-	515	974	981	442
Stage 1	-	-	-	-	-	-	519	-	-	444	444	-
Stage 2	-	-	-	-	-	-	449	-	-	530	537	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1117	-	-	1035	-	-	233	0	560	231	249	615
Stage 1	-	-	-	-	-	-	540	0	-	593	575	-
Stage 2	-	-	-	-	-	-	589	0	-	533	523	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1117	-	-	1035	-	-	229	-	560	229	248	615
Mov Cap-2 Maneuver	-	-	-	-	-	-	229	-	-	229	248	-
Stage 1	-	-	-	-	-	-	539	-	-	592	574	-
Stage 2	-	-	-	-	-	-	579	-	-	529	522	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	20.2	13.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	229	560	1117	-	-	1035	-	-	433
HCM Lane V/C Ratio	0.07	0.006	0.002	-	-	0.001	-	-	0.03
HCM Control Delay (s)	21.9	11.5	8.2	-	-	8.5	-	-	13.6
HCM Lane LOS	C	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	0	-	-	0	-	-	0.1









Intersection

Intersection Delay, s/veh	20.8
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	84	405	314	82	72	69
Future Vol, veh/h	84	405	314	82	72	69
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	450	349	91	80	77
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	24.4	19.7	11.3
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	17%	0%
Vol Thru, %	0%	100%	0%	51%
Vol Right, %	0%	0%	83%	49%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	314	82	489	141
LT Vol	314	0	84	0
Through Vol	0	82	0	72
RT Vol	0	0	405	69
Lane Flow Rate	349	91	543	157
Geometry Grp	7	7	2	5
Degree of Util (X)	0.662	0.16	0.782	0.264
Departure Headway (Hd)	6.833	6.324	5.181	6.058
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	527	566	695	591
Service Time	4.587	4.078	3.236	4.126
HCM Lane V/C Ratio	0.662	0.161	0.781	0.266
HCM Control Delay	22.1	10.3	24.4	11.3
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	4.8	0.6	7.6	1.1

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	480	11	6	815	0	13	0	3	0	0	0
Future Vol, veh/h	0	480	11	6	815	0	13	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	516	12	6	876	0	14	0	3	0	0	0





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	876	0	0	528	0	0	1404	-	516	1412	1416	876
Stage 1	-	-	-	-	-	-	516	-	-	888	888	-
Stage 2	-	-	-	-	-	-	888	-	-	524	528	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	771	-	-	1039	-	-	117	0	559	116	137	348
Stage 1	-	-	-	-	-	-	542	0	-	338	362	-
Stage 2	-	-	-	-	-	-	338	0	-	537	528	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	771	-	-	1039	-	-	117	-	559	115	136	348
Mov Cap-2 Maneuver	-	-	-	-	-	-	117	-	-	115	136	-
Stage 1	-	-	-	-	-	-	542	-	-	338	360	-
Stage 2	-	-	-	-	-	-	336	-	-	534	528	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	34.6	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	117	559	771	-	-	1039	-	-	-
HCM Lane V/C Ratio	0.119	0.006	-	-	-	0.006	-	-	-
HCM Control Delay (s)	39.9	11.5	0	-	-	8.5	-	-	0
HCM Lane LOS	E	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.4	0	0	-	-	0	-	-	-










Intersection

Intersection Delay, s/veh 133.3
Intersection LOS F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	125	355	660	65	95	155
Future Vol, veh/h	125	355	660	65	95	155
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	139	394	733	72	106	172
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	43.4	232.8	17.2
HCM LOS	E	F	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	26%	0%
Vol Thru, %	0%	100%	0%	38%
Vol Right, %	0%	0%	74%	62%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	660	65	480	250
LT Vol	660	0	125	0
Through Vol	0	65	0	95
RT Vol	0	0	355	155
Lane Flow Rate	733	72	533	278
Geometry Grp	7	7	2	5
Degree of Util (X)	1.498	0.137	0.894	0.501
Departure Headway (Hd)	7.354	6.842	6.803	7.171
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	499	522	539	506
Service Time	5.116	4.604	4.803	5.171
HCM Lane V/C Ratio	1.469	0.138	0.989	0.549
HCM Control Delay	254.7	10.7	43.4	17.2
HCM Lane LOS	F	B	E	C
HCM 95th-tile Q	37.5	0.5	10.3	2.8

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	955	17	1	465	1	15	0	3	0	0	3
Future Vol, veh/h	2	955	17	1	465	1	15	0	3	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	1027	18	1	500	1	16	0	3	0	0	3





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	501	0	0	1045	0	0	1535	-	1027	1545	1552	501
Stage 1	-	-	-	-	-	-	1031	-	-	503	503	-
Stage 2	-	-	-	-	-	-	504	-	-	1042	1049	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1063	-	-	666	-	-	95	0	285	93	113	570
Stage 1	-	-	-	-	-	-	281	0	-	551	541	-
Stage 2	-	-	-	-	-	-	550	0	-	277	304	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1063	-	-	666	-	-	94	-	285	92	113	570
Mov Cap-2 Maneuver	-	-	-	-	-	-	94	-	-	92	113	-
Stage 1	-	-	-	-	-	-	280	-	-	550	540	-
Stage 2	-	-	-	-	-	-	546	-	-	273	303	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	45.6	11.4
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	94	285	1063	-	-	666	-	-	570
HCM Lane V/C Ratio	0.172	0.011	0.002	-	-	0.002	-	-	0.006
HCM Control Delay (s)	51.1	17.8	8.4	-	-	10.4	-	-	11.4
HCM Lane LOS	F	C	A	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.6	0	0	-	-	0	-	-	0










Intersection

Intersection Delay, s/veh	199.5
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	225	730	355	95	70	110
Future Vol, veh/h	225	730	355	95	70	110
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	250	811	394	106	78	122
Number of Lanes	1	0	1	1	1	0





Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	312.2	33.9	15.9
HCM LOS	F	D	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	24%	0%
Vol Thru, %	0%	100%	0%	39%
Vol Right, %	0%	0%	76%	61%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	355	95	955	180
LT Vol	355	0	225	0
Through Vol	0	95	0	70
RT Vol	0	0	730	110
Lane Flow Rate	394	106	1061	200
Geometry Grp	7	7	2	5
Degree of Util (X)	0.803	0.2	1.644	0.364
Departure Headway (Hd)	8.947	8.428	5.579	8.23
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	410	429	658	440
Service Time	6.647	6.128	3.649	6.23
HCM Lane V/C Ratio	0.961	0.247	1.612	0.455
HCM Control Delay	39.4	13.2	312.2	15.9
HCM Lane LOS	E	B	F	C
HCM 95th-tile Q	7.1	0.7	58.1	1.6

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	480	11	6	815	2	13	0	3	0	0	1
Future Vol, veh/h	3	480	11	6	815	2	13	0	3	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	516	12	6	876	2	14	0	3	0	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	878	0	0	528	0	0	1412	-	516	1419	1423	877
Stage 1	-	-	-	-	-	-	522	-	-	889	889	-
Stage 2	-	-	-	-	-	-	890	-	-	530	534	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	769	-	-	1039	-	-	116	0	559	114	136	348
Stage 1	-	-	-	-	-	-	538	0	-	338	361	-
Stage 2	-	-	-	-	-	-	337	0	-	533	524	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	769	-	-	1039	-	-	115	-	559	113	135	348
Mov Cap-2 Maneuver	-	-	-	-	-	-	115	-	-	113	135	-
Stage 1	-	-	-	-	-	-	536	-	-	337	359	-
Stage 2	-	-	-	-	-	-	334	-	-	528	522	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			35.1			15.4		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	115	559	769	-	-	1039	-	-	348			
HCM Lane V/C Ratio	0.122	0.006	0.004	-	-	0.006	-	-	0.003			
HCM Control Delay (s)	40.6	11.5	9.7	-	-	8.5	-	-	15.4			
HCM Lane LOS	E	B	A	-	-	A	-	-	C			
HCM 95th %tile Q(veh)	0.4	0	0	-	-	0	-	-	0			









Intersection

Intersection Delay, s/veh	134.4
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	125	355	662	65	95	155
Future Vol, veh/h	125	355	662	65	95	155
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	139	394	736	72	106	172
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	43.5	234.8	17.2
HCM LOS	E	F	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	26%	0%
Vol Thru, %	0%	100%	0%	38%
Vol Right, %	0%	0%	74%	62%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	662	65	480	250
LT Vol	662	0	125	0
Through Vol	0	65	0	95
RT Vol	0	0	355	155
Lane Flow Rate	736	72	533	278
Geometry Grp	7	7	2	5
Degree of Util (X)	1.503	0.137	0.894	0.501
Departure Headway (Hd)	7.354	6.842	6.81	7.177
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	493	522	539	506
Service Time	5.116	4.604	4.81	5.177
HCM Lane V/C Ratio	1.493	0.138	0.989	0.549
HCM Control Delay	256.8	10.7	43.5	17.2
HCM Lane LOS	F	B	E	C
HCM 95th-tile Q	37.8	0.5	10.3	2.8

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	955	17	1	465	2	15	0	3	3	0	9
Future Vol, veh/h	7	955	17	1	465	2	15	0	3	3	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	0	200	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	1027	18	1	500	2	16	0	3	3	0	10





Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	502	0	0	1045	0	0	1551	-	1027	1557	1564	501
Stage 1	-	-	-	-	-	-	1043	-	-	503	503	-
Stage 2	-	-	-	-	-	-	508	-	-	1054	1061	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1062	-	-	666	-	-	92	0	285	92	112	570
Stage 1	-	-	-	-	-	-	277	0	-	551	541	-
Stage 2	-	-	-	-	-	-	547	0	-	273	300	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1062	-	-	666	-	-	90	-	285	90	111	570
Mov Cap-2 Maneuver	-	-	-	-	-	-	90	-	-	90	111	-
Stage 1	-	-	-	-	-	-	275	-	-	547	540	-
Stage 2	-	-	-	-	-	-	537	-	-	268	298	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	47.6	20.6
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	90	285	1062	-	-	666	-	-	244
HCM Lane V/C Ratio	0.179	0.011	0.007	-	-	0.002	-	-	0.053
HCM Control Delay (s)	53.5	17.8	8.4	-	-	10.4	-	-	20.6
HCM Lane LOS	F	C	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.6	0	0	-	-	0	-	-	0.2

Intersection

Intersection Delay, s/veh 201.5
Intersection LOS F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	225	733	357	95	70	110
Future Vol, veh/h	225	733	357	95	70	110
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	250	814	397	106	78	122
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	315.3	34.3	15.9
HCM LOS	F	D	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	23%	0%
Vol Thru, %	0%	100%	0%	39%
Vol Right, %	0%	0%	77%	61%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	357	95	958	180
LT Vol	357	0	225	0
Through Vol	0	95	0	70
RT Vol	0	0	733	110
Lane Flow Rate	397	106	1064	200
Geometry Grp	7	7	2	5
Degree of Util (X)	0.807	0.2	1.651	0.364
Departure Headway (Hd)	8.963	8.444	5.585	8.251
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	409	428	649	440
Service Time	6.663	6.144	3.654	6.251
HCM Lane V/C Ratio	0.971	0.248	1.639	0.455
HCM Control Delay	39.9	13.2	315.3	15.9
HCM Lane LOS	E	B	F	C
HCM 95th-tile Q	7.2	0.7	58.5	1.6

MOVEMENT SUMMARY



Site: 1 [Barton Rd / Rocklin Rd]

Cumulative AM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Barton Road											
3	L2	717	3.0	0.772	18.2	LOS C	14.4	368.1	0.68	0.60	27.1
8	T1	71	3.0	0.772	18.2	LOS C	14.4	368.1	0.68	0.60	27.2
Approach		788	3.0	0.772	18.2	LOS C	14.4	368.1	0.68	0.60	27.1
North: Barton Road											
4	T1	103	3.0	0.519	16.6	LOS C	2.9	73.1	0.71	0.85	29.0
14	R2	168	3.0	0.519	16.6	LOS C	2.9	73.1	0.71	0.85	28.4
Approach		272	3.0	0.519	16.6	LOS C	2.9	73.1	0.71	0.85	28.6
West: Rocklin Road											
5	L2	136	3.0	0.498	9.3	LOS A	2.9	73.7	0.36	0.21	31.4
12	R2	386	3.0	0.498	9.3	LOS A	2.9	73.7	0.36	0.21	30.9
Approach		522	3.0	0.498	9.3	LOS A	2.9	73.7	0.36	0.21	31.0
All Vehicles		1582	3.0	0.772	15.0	LOS B	14.4	368.1	0.58	0.51	28.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 2010.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: C:\Users\JDF\KDA\Reports\Loomis\Flying Gate\1 Cum AM 2-12-18.sip7

MOVEMENT SUMMARY



Site: 1 [Barton Rd / Rocklin Rd]

Cumulative PM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Barton Road											
3	L2	386	3.0	0.559	12.0	LOS B	4.4	112.2	0.57	0.56	29.4
8	T1	103	3.0	0.559	12.0	LOS B	4.4	112.2	0.57	0.56	29.5
Approach		489	3.0	0.559	12.0	LOS B	4.4	112.2	0.57	0.56	29.4
North: Barton Road											
4	T1	76	3.0	0.265	8.0	LOS A	1.0	26.1	0.50	0.47	32.7
14	R2	120	3.0	0.265	8.0	LOS A	1.0	26.1	0.50	0.47	31.9
Approach		196	3.0	0.265	8.0	LOS A	1.0	26.1	0.50	0.47	32.2
West: Rocklin Road											
5	L2	245	3.0	0.928	31.7	LOS D	18.7	478.7	1.00	0.56	23.9
12	R2	793	3.0	0.928	31.7	LOS D	18.7	478.7	1.00	0.56	23.6
Approach		1038	3.0	0.928	31.7	LOS D	18.7	478.7	1.00	0.56	23.7
All Vehicles		1723	3.0	0.928	23.4	LOS C	18.7	478.7	0.82	0.55	25.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 2010.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY



Site: 1 [Barton Rd / Rocklin Rd]

Cumulative plus Project AM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Barton Road											
3	L2	720	3.0	0.774	18.3	LOS C	14.6	374.6	0.68	0.60	27.0
8	T1	71	3.0	0.774	18.3	LOS C	14.6	374.6	0.68	0.60	27.1
Approach		790	3.0	0.774	18.3	LOS C	14.6	374.6	0.68	0.60	27.0
North: Barton Road											
4	T1	103	3.0	0.520	16.7	LOS C	2.9	73.3	0.71	0.85	29.0
14	R2	168	3.0	0.520	16.7	LOS C	2.9	73.3	0.71	0.85	28.4
Approach		272	3.0	0.520	16.7	LOS C	2.9	73.3	0.71	0.85	28.6
West: Rocklin Road											
5	L2	136	3.0	0.498	9.3	LOS A	2.9	73.7	0.36	0.21	31.4
12	R2	386	3.0	0.498	9.3	LOS A	2.9	73.7	0.36	0.21	30.9
Approach		522	3.0	0.498	9.3	LOS A	2.9	73.7	0.36	0.21	31.0
All Vehicles		1584	3.0	0.774	15.1	LOS C	14.6	374.6	0.58	0.52	28.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 2010.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY



Site: 1 [Barton Rd / Rocklin Rd]

Cumulative plus Project PM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Barton Road											
3	L2	388	3.0	0.561	12.1	LOS B	4.4	113.9	0.57	0.56	29.4
8	T1	103	3.0	0.561	12.1	LOS B	4.4	113.9	0.57	0.56	29.5
Approach		491	3.0	0.561	12.1	LOS B	4.4	113.9	0.57	0.56	29.4
North: Barton Road											
4	T1	76	3.0	0.266	8.0	LOS A	1.0	26.1	0.50	0.47	32.7
14	R2	120	3.0	0.266	8.0	LOS A	1.0	26.1	0.50	0.47	31.9
Approach		196	3.0	0.266	8.0	LOS A	1.0	26.1	0.50	0.47	32.2
West: Rocklin Road											
5	L2	245	3.0	0.930	32.1	LOS D	19.1	487.8	1.00	0.56	23.8
12	R2	797	3.0	0.930	32.1	LOS D	19.1	487.8	1.00	0.56	23.5
Approach		1041	3.0	0.930	32.1	LOS D	19.1	487.8	1.00	0.56	23.6
All Vehicles		1728	3.0	0.930	23.7	LOS C	19.1	487.8	0.82	0.55	25.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 2010.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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